

Ambulatory Surgery Centers

ASC section on page 25.

In this issue

Hospital outpatient payments to rise by 3.3% . . .	5
MATERIALS MANAGEMENT. New team tames technology requests	13
MATERIALS MANAGEMENT. Sizing up your value analysis process	15
MATERIALS MANAGEMENT. What's right number of inventory turns?	17
MATERIALS MANAGEMENT. How a small hospital trimmed its inventory	20
Tracking inventory the wireless way	21
MANAGING TODAY'S OR SUITE. OR managers gather in Chicago	22
WORKPLACE	24
AMBULATORY SURGERY CENTERS. Making value analysis work in an ASC	25
OR MANAGER SUBJECT INDEX, 2004	27
AT A GLANCE	32

Process improvement

Boston hospital sees big impact from smoothing elective schedule

When Boston Medical Center (BMC) accepted a \$250,000 grant 2 years ago to address overcrowding in the emergency department (ED), it volunteered for a tough assignment—smoothing the elective surgical schedule.

Research has shown, surprisingly, that in hospitals with strained capacity, the elective surgical schedule actually is a bigger source of bottlenecks on patient units and ICUs than emergencies.

BMC has applied the research findings, and a year later the efforts are paying off.

In the process, one of BMC's surgical suites, which does its trauma cases, "blew up" most of its block schedule, replacing it with a dedicated room for

urgent/emergent cases and mostly open scheduled time. The new schedule has dramatically reduced canceled cases. Not only have surgeons not rebelled, they're finding life is easier for them and their patients.

In making the changes, BMC has embraced the work of Eugene Litvak, PhD, of Boston University, who has studied the effect of variability in patient flow on hospital operations. Interestingly, a major source of what he terms "artificial" variability is elective surgery.

In a study published in 2003, Litvak and colleagues from Harvard Medical School found that during the hospital's busiest times, nearly 70% of the diversions from the ICU were associated with

Continued on page 10

Joint Commission

Take steps to prevent anesthesia awareness, JCAHO says in alert

The Joint Commission on Accreditation of Healthcare Organizations, in an Oct 6 Sentinel Event Alert, called on organizations to develop a policy on anesthesia awareness that includes educating staff, identifying patients at risk, using anesthesia monitoring techniques, and providing follow-up care.

Patients should receive follow-up similar to that for postoperative infections, JCAHO President Dennis O'Leary, MD, said at a press conference.

Experts estimate anesthesia awareness occurs in 1 to 2 of every 1,000 patients having general anesthesia, with about 26,000 cases in the US each year.

Patients who wake up during sur-

gery are mentally aware of what is happening but cannot move or alert their caregivers. Among effects they report are auditory recollections (48%), sensations of not being able to breathe (48%), and pain (28%). More than 50% say they experience postoperative mental distress, and some decide never to have surgery again.

The number of patients who are anxious about waking up in the middle of surgery has increased dramatically in the past 10 years, JCAHO says.

The alert was issued to draw attention to the problem, Dr O'Leary told reporters at the news conference. Joining in the alert were the American Society of

Continued on page 8

Please see the ad for
SKYTRON INC.
in the *OR Manager* print version.

Upcoming

A better preop process

Learn how others have improved their process for getting patients ready for surgery.

New artificial spinal disc

What you can expect from this new technology to treat low-back pain.

**OR
Manager**

The monthly publication
for OR decision makers

December 2004 Vol 20, No 12

OR Manager is a monthly publication for personnel in decision-making positions in the operating room.

Elinor S. Schrader: Publisher

Patricia Patterson: Editor

Judith M. Mathias, RN, MA:
Clinical editor

Billie Fernsebner, RN, MSN:
Consulting editor

Janet K. Schultz, RN, MSN:
Consulting editor

Kathy Shaneberger, RN, MSN, CNOR:
Consulting editor

OR Manager (USPS 743-010), (ISSN 8756-8047) is published monthly by OR Manager, Inc, 1807 Second St, Suite 61, Santa Fe, NM 87505-3499. Periodicals postage paid at Santa Fe, NM and additional post offices. POSTMASTER: Send address changes to OR Manager, PO Box 5303, Santa Fe, NM 87502-5303.

OR Manager is indexed in the Cumulative Index to Nursing and Allied Health Literature and MEDLINE/PubMed.

Copyright © 2004 OR Manager, Inc. All rights reserved. No part of this publication may be reproduced without written permission.

Subscription rates: \$86 per year. Super subscriptions (electronic) \$129 per year. Canadian, \$98. Foreign, \$115. Single issues \$10. Address subscription requests to PO Box 5303, Santa Fe, NM 87502-5303. Tele: 800/442-9918 or 505/982-0510. Web site: www.ormanager.com E-mail: info@ormanager.com

Editorial Office: PO Box 5303, Santa Fe, NM 87502-5303. Tel: 800/442-9918. Fax: 505/983-0790.

E-mail: ppatterson@ormanager.com

Advertising Manager: Anthony J. Jannetti, Inc, East Holly Ave/Box 56, Pitman, NJ 08071. Telephone: 856/256-2300; Fax: 856/589-7463. John R. Schmus, national advertising manager. E-mail: schmusj@ajj.com

Publisher's Note

Do you lie awake at night worrying about what to get your pet for Christmas?

We are here to help with this holiday dilemma.

Believe it or not (we are a bit skeptical ourselves, but we read it in *The New York Times*), according to the American Pet Products Manufacturers Association, we are spending more on pet stuff than toys. Spending on pet products tops \$34 billion, while we are only putting out a niggardly \$21 billion for toys.

If you are uncertain about what gifts your dog or cat would appreciate most, go directly to the potential recipient and ask. That's what we did.

We sat down with our 5-year-old golden retriever, Maizie, and asked her what she wanted to see under the tree on Christmas morning.

After a thoughtful pause, she said, "On Maslow's hierarchy of needs, I do pretty well. I have a comfortable home, a sofa for resting during the day, and sufficient food. I am working on self-actualization now."

And I thought she was just sleeping all day.

"But I do get tired of plain kibble, day in, day out. I would enjoy some Real Steak Treats from Omaha Steaks. You enjoy Omaha Steaks, and I know I would too.

"Or perhaps you could get some of Newman's organic premium dog food. I have always liked Paul Newman's acting, and I think organic beef raised without antibiotics is best. I certainly don't want to get mad cow disease. Ugh."

I raised my eyebrows at such upscale tastes.

"Oh, and I could use a new bed. I read in *The New York Times* that there is an inflatable air bed for dogs with 2 separate chambers that are adjustable for superior comfort. I need rest from my daily chores, which are chasing squirrels and rearranging the garden. (Just a little aside, I think your landscaping is a little boring. I am starting to dig on a new site tomorrow. You will need some new



Maizie (right) looks forward to celebrating the holidays with her friend Travers.

plants in the spring.) I am not asking for the \$2,195 Gucci goat-hair bed, even though it sounded wonderful."

"You already have an Orvis bed as well as the sofa, I am not sure you need anything more," I responded. "And I wondered where my *Times* went this morning."

"Just catching up on their new section introduced just for dogs and cats. I was reading about who's hot for the next AKC dog show. I hope it is not one of those poodles with the weird haircuts.

"Now as a golden I already have a very nice fur coat and don't need anything else to wear, but I know that others dogs aren't as fortunate. They might enjoy a Ralph Lauren Polo shirt with that classic ribbed collar and banded short sleeves. Or more macho canines might like the denim and leather jackets from Harley-Davidson along with a pair of riding goggles for the open road.

"I am not sure that I would want any 'pawlish,' the Opi nail polish that comes in Fire Hydrant Red, Doghouse Blues, and Poodle Pink, but I know that silly Bichon Frise down the street would go ga-ga over that.

"I certainly could use some of the Paul Mitchell shampoo and conditioner just for dogs. I was very impressed when I read that it had been tested on humans first."

"Don't you want any of the traditional gifts for dogs—the soft stuffed squeaky toys or rawhide bones?" I asked.

"Boorrrring."

"Oh," added Maizie, "don't forget the champagne." ❖

—Elinor S. Schrader

Please see the ad for
BSW INC.
in the *OR Manager* print version.

Hospital outpatient payments to rise by 3.3%

Hospitals will receive a 3.3% inflation update in outpatient payments starting Jan 1. The Centers for Medicare and Medicaid Services (CMS) issued final rules for the outpatient prospective payment system (OPPS) Nov 2. The rules were scheduled to appear in the Nov 15 *Federal Register* with a 60-day comment period.

Among new provisions for 2005:

- a "Welcome to Medicare Physical" for people new to Medicare, which will pay hospitals a \$78 facility fee
- increased hospital payments for certain types of screenings Medicare already covers, such as pelvic and breast exams, barium enema, bone density studies, flexible sigmoidoscopy, and screening colonoscopy
- a new policy making it possible for

CMS decided to keep the inpatient-only list for 2005.

hospitals to receive payment for new drugs and biologicals as soon as they are approved by the Food and Drug Administration instead of waiting for a code and payment rate

- a continued rule setting rates for brachytherapy sources on cost-adjusted charges plus new codes for

high-activity brachytherapy sources

- improved payment accuracy for blood and blood products with new individual APCs for all blood products
- extended "hold harmless" payments for small rural hospitals with 100 or fewer beds and sole community hospitals in rural areas
- simplified payment for observation services.

The rule also includes the annual update of APC groups and relative payment weights. CMS is required to make adjustments yearly that reflect changes in practice, technology, costs, and so forth. An outside expert APC Panel reviews the changes.

CMS reviewed some codes that are packaged into the APC payment to see if they should be paid separately. Among these was CPT 76937, ultrasound guidance for vascular access. But CMS decided the code should remain packaged for 2005 because of concern "there will be unnecessary utilization of this procedure if it is separately payable."

Payment for new technology

The rule deals with some payment issues for new technology. New technology is initially assigned to a "new technology APC," then reassigned to a regular clinical APC in 2 or 3 years or after CMS has enough data. Some hospitals say placing a technology in a clinical APC can result in a payment that is too low for some technology-dependent services. These are CMS's decisions on some of these issues, in response to previous comments:

- **Bard Endoscopic Stapling System.** CMS decided to move the new technology code C9703 (which will be replaced with CPT code 0008T) to clinical APC 422 even though some commenters said this would reduce the payment from \$1,650 to \$1,274. CMS said it would accept comment on this change for 60 days.
- **Stretta system for gastroesophageal reflux disease.** CMS will discontinue the new technology code C9701 and place this technology under a new CPT code 43257 (upper GI endoscopy with delivery of thermal energy). The code will be in clinical APC 422.

Continued on page 7

Advisory Board

Amy Bethel, RN, MPA, CNA
Executive director, surgical services
Iowa Health, Des Moines

Mark E. Bruley, EIT
Vice president of accident & forensic investigation, ECRI
Plymouth Meeting, Pa

Judith Canfield, RNC, MNA, MBA
Associate administrator of surgical services
University of Washington Medical Center, Seattle

Christy Dempsey, RN, BSN, CNOR
Vice president
St John's Regional Health Center
Springfield, Mo

Franklin Dexter, MD, PhD
Associate professor
Department of Anesthesia
University of Iowa, Iowa City

Mary Diamond, RN, MBA, CNOR
Director of surgical services
Sharp Healthcare, San Diego

Marion L. Freehan, RN, MPA/HA, CNOR
Nurse manager, main operating rooms, Massachusetts General Hospital, Boston

Jo Harbaugh, RN, BS, CGRN
Administrator, Digestive Disease Consultants
Executive director, Digestive Disease Endoscopy Center
Normal, Ill

William J. Mazzei, MD
Medical director, perioperative services, University of California, San Diego

Mary M. Murphy, RN, BSN, CNOR
Director, surgical services
Munson Medical Center
Traverse City, Mich

Barbara Pankratz, RN, MSN
Director, surgical services
University of Wisconsin Hospital & Clinics, Madison

Robert V. Rege, MD
Professor and chairman
Department of surgery
UT Southwestern Medical Center
Dallas

Marimargaret Reichert, RN, MA
Administrator, Surgical Care Center
Southwest General Health Center
Middleburg Heights, Ohio

Kathy E. Shaneberger, RN, MSN, CNOR
Director, perioperative services and ortho/neuro service line
Mercy General Health Partners
Muskegon, Mich

Allen Warren
Business manager, surgical services
Mission St Joseph's Hospital
Asheville, NC

Please see the ad for
MEDLINE INDUSTRIES INC.
in the *OR Manager* print version.

- **Capsule endoscopy.** CMS is moving the CPT code 91110 for this procedure from a new technology code to clinical APC 142, which has a payment of \$503, rather than to the proposed APC 141, which would have resulted in lower payment. Commenters reported that the capsule costs \$450.
- **Kyphoplasty.** The manufacturer wanted a new technology APC for this procedure, which treats vertebral compression fractures. Kyphoplasty is currently billed under CPT 22899 (unlisted procedure of the spine). CMS decided to assign it to clinical APC 51 instead. The new C codes for the procedure are C9718 and C9719.

Other expensive devices

CMS also responded to comments that payments for other expensive devices, such as cochlear implants, are too low to cover the cost. CMS explained that it is changing its methodology for determining median costs for device-dependent APCs so payments will more accurately reflect costs as submitted on Medicare claims.

Here are some CMS comments:

- **Cryoablation of the prostate.** Some commenters said external data showed hospital costs for this procedure exceed \$9,000. But CMS says its claims data show a median cost of \$6,563 so it set the APC payment at \$6,569.
- **Cochlear implants.** One commenter did an independent statistical analysis of Medicare claims showing hospital costs of \$27,954 for claims with code L8614 and asked CMS to set payment at that amount. The commenter said some hospitals might be using the cochlear implant code for procedures with less expensive devices and suggested CMS provide education on this. CMS said its data showed the median cost was \$26,007, which is the basis for the 2005 payment for APC 259. CMS said it would consider education but did not want to single out one device for that effort.
- **Cardioverter-defibrillators.** A commenter wanted to see a separate payment for these devices, which were packaged into APC 107 and APC 108 for 2004. CMS responded

Vaginal hysterectomy stays on the inpatient list.

that it is adjusting its methodology for figuring median costs for device-dependent APCs, setting the payment for APC 107 at \$18,460 for 2005. That is less than the \$19,432 in 2004 but not as low as it would have been using CMS's previous methodology. The 2005 payment for APC 108, which is for insertion/replacement/repair of leads, will be \$24,788.

Inpatient-only list

CMS decided to keep the inpatient-only list for 2005. This is a list of procedures Medicare will pay for in a hospital only if performed on an inpatient basis.

Some hospital associations called for eliminating the list, saying physicians should make the decision about where patients have surgery. The list presents difficulty to hospitals because they must make sure procedures on the inpatient-only list are not performed and billed on an outpatient basis for Medicare patients.

But CMS did not go along with the request, saying it is concerned that eliminating the inpatient list "could result in unsafe or uncomfortable care for Medicare beneficiaries." CMS is also concerned that if done in the outpatient setting, these procedures might result in long observation stays and outpatient copays for patients.

CMS also rejected a request to set up an appeals process for the list.

In reviewing procedures for removal from the inpatient list, CMS uses as a rule of thumb that the procedure is being performed 60% of the time in the outpatient area for Medicare patients.

CMS did remove 22 procedure codes from the inpatient list (sidebar). But it kept other procedures on the list even though some had advocated moving them to outpatient status. Remaining on the inpatient list are 11 spinal procedure codes, including codes for

Procedure codes removed from inpatient list

Code	Description
00174	Anesth, pharyngeal surgery
00928	Anesth, removal of testis
21356	Treat zygomatic arch fracture
21557	Remove tumor, neck/chest
22222	Osteotomy of spine; thoracic
24149	Radical resection of elbow
31292	Nasal/sinus endoscopy, surgical
43510	Gastrotomy with insertion of tube
45541	Proctopexy for prolapse, perineal
50020	Renal abscess, open drainage
50570	Renal endoscopy
50572	Renal endoscopy with ureteral catheterization
50574	Renal endoscopy with biopsy
50575	Renal endoscopy with endopyelotomy
50576	Renal endoscopy with treatment
53085	Drainage of perineal urinary extravasation
58770	Salpingostomy
50578	[Deleted code]
44901	Drain appendiceal abscess, percutaneous
49021	Drain peritoneal abscess, percutaneous
49041	Drain subdiaphrag abscess, percutaneous
49061	Drain retroperitoneal abscess, percutaneous

Source: Center for Medicare and Medicaid Services.

arthrodesis (22554 and 22575), spinal instrumentation (22840, 22842, 22845, 22846, and 22855), laminectomy (63043, 63044), and anterior cervical discectomy (63075 and 63076). CMS said these procedures, still are performed on an inpatient basis more than 90% of the time, and no evidence was submitted to show they could be done safely and effectively for Medicare patients in the outpatient setting.

Also kept on the inpatient list is vaginal hysterectomy (CPT 58260), which CMS says still is performed more than 90% of the time in the inpatient setting for Medicare patients.

Have an issue with APCs?

The CMS APC Advisory Panel considers issues related to APC assignment or payment. For information, phone 877/449-5659 or e-mail APCPanel@cms.hhs.gov. ❖

The text of the rule is at <http://www.cms.hhs.gov/providers/hopps/2005fc/1427fc.asp>

Continued from page 1

Anesthesiologists (ASA) and the American Association of Nurse Anesthetists (AANA).

JCAHO encourages organizations to review the alerts but does not require complying with them. Surveyors may ask organizations if they are familiar with the alerts.

Who is at risk?

Anesthesia awareness is an issue for the entire institution, ASA president Roger W. Litwiller, MD, told reporters, adding that ASA has been educating its members about awareness for years. In the rare case when it occurs, he said patients deserve the support of the entire health care team. Specific recommendations for preventing awareness were published in the February 2000 *Anesthesiology*.

Awareness is most common in patients who must be given a lower dose of anesthetics and have the drugs titrated to reduce side effects. This includes patients having cardiac, obstetric, and major trauma surgery. Often it isn't safe, for example, to give obstetrical patients the deepest level of anesthesia because of the possible effect on the baby.

Monitoring patients to prevent awareness is challenging, and awareness is difficult to recognize while it is occurring. Indicators of awareness, such as high blood pressure, fast heart rate, movement, or hemodynamic changes, are often masked by use of paralytic agents to achieve muscle relaxation, Dr Litwiller said.

"The nature of the surgeries we do today often requires that the patient be motionless, and there is really only one way to guarantee that: giving them enough of a drug to make sure they are paralyzed," he said. In delicate surgery, it would be a catastrophe if the patient moved at a critical time.

Patients react differently to anesthesia, which makes preventing awareness challenging. Muscle relaxants are given in relation to the patient's weight and illness as well as the type of surgery.

Patients need follow-up

A key point of the alert is to make sure patients who have an awareness experience get attention postoperatively.

"One of the most critical issues we are

We want hospitals and surgery centers to monitor more closely.

trying to raise is to manage the patient who has had the experience," noted Dr O'Leary.

The alert calls on organizations to have a policy to identify patients at high risk, discuss the potential for an awareness experience with them before surgery, and provide for follow-up. Follow-up should continue for a week because patients have more recall about awareness a week after surgery than 24 hours after surgery—with the frequency of recall going up by a third to a half, he said.

"If we don't follow up with these patients at the right time, we are missing information, and we are not fully serving the patient," Dr O'Leary said.

Staff must be educated so they can give compassion and support. Staff in all areas that care for postoperative patients need to be educated, he noted, because patients may remember the experience while in the ICU, medical-surgical unit, obstetrical unit, nursing home, or at home. The more time passes before the patient reports the experience, the greater the risk that caregivers will discount the patient's concern, he said.

For ambulatory surgery patients, Dr Litwiller suggested a follow-up call from the anesthesia provider's office 2, 3, or 4 days after surgery. Surgeons can also discuss the matter during the patient's postoperative appointment.

"If we can make the whole medical community aware that this is a potential problem, we have a possibility to pick up cases that might slip through our fingers," he said.

A patient's concern

Carol Wehrer, who says she still suffers the traumatic effects of being awake during surgery to remove her eye in 1998, is waging a campaign to educate physicians,

JCAHO advice on anesthesia awareness

The Joint Commission's Sentinel Event Alert recommends that organizations performing procedures under general anesthesia:

1. Develop and implement an anesthesia awareness policy that addresses:
 - education of clinical staff about awareness and how to manage patients
 - identification of patients at high risk of an awareness experience and discussion of the potential for awareness with these patients before surgery
 - application of anesthesia monitoring techniques, including timely maintenance of anesthesia equipment
 - postoperative follow-up of all patients who have undergone general anesthesia, including children
 - identification, management, and, if appropriate, referral of patients who have experienced awareness.
2. Ensure access to counseling and other support for patients who experience post-traumatic stress syndrome or other mental distress.

Source: Joint Commission on Accreditation of Healthcare Organizations.
www.jcaho.org

hospitals, and the public about her experience and that of others. She is founder of the Anesthesia Awareness Campaign (www.anesthesiaawareness.com).

Wehrer told *OR Manager* she took her concerns to JCAHO in late 2003 and later sent them her recommendations.

During her surgery, she says, "I tried screaming, but I knew nothing was coming out." Since then, she says she has not slept through the night and sleeps in a recliner because she cannot stand to be supine. She says her concerns were treated dismissively by the anesthesiologist

and nursing staff. Since then, she says she has spoken with more than 2,000 patients who have had similar experiences.

In addition to education, Weihrer advocates psychological support for patients who've had an awareness experience. She adds, "Every patient who has had this experience deserves an apology."

What is the role of technology?

New technology is being developed to aid in detecting anesthesia awareness. These devices measure brain activity rather than physiological responses. They include the Bispectral Index (BIS), spectral edge frequency (SEF), and median frequency (MF) monitors.

Dr O'Leary said there is not enough evidence yet to clearly define the role of these devices, and more studies are being conducted. The Food and Drug Administration cleared the BIS monitor in 2003 for monitoring to reduce the risk of anesthesia awareness. The device was originally cleared in 1996.

Two major studies on monitoring have been reported this year. In a prospective study of 5,000 patients in Sweden who were compared with 7,800 control patients, BIS monitoring was associated with a significantly reduced incidence of awareness—0.04% versus 0.18%. A prospective, randomized multicenter study of 2,500 patients published in *Lancet* found BIS monitoring reduced the risk of awareness by 82%; there were 2 reports in the monitored group and 11 in the unmonitored group. The researchers estimated the cost of preventing one case of awareness in a high-risk patient at about \$2,200.

ASA and AANA have created a task force to analyze the research and plan to issue a report in the next year.

Dr O'Leary noted: "We want hospitals and surgery centers to monitor more closely whether patients are regaining consciousness, either by being more diligent or using brain monitors or both."

Dr Litwiller noted that the technology presents some difficulties, and "there will never be a replacement for the vigilant anesthesiologist or the vigilant nurse anesthetist.

"The problem is being able to accurately interpret the data that the device gives us. You can have one of these brain wave monitors on a patient, and the vital

Staff in all areas need to be educated.

signs are stable, and all of a sudden the monitor gives you a different reading from your vital signs. The question then becomes, do you treat the machine or do you treat the patient?"

AANA's immediate past-president, Tom McKibban, CRNA, MS, added that he has used the monitors for several years and thinks they are useful but has gotten false numbers at times.

"Even with the monitor, you have to be vigilant and understand all of the processes, not just one monitor," he said.

The ASA and AANA provide guidelines for administering and monitoring anesthesia, which include:

- using premedication with amnesic drugs when light anesthesia is anticipated
- administering more than a "sleep dose" of induction agents if they will be followed by tracheal intubation
- avoiding muscle paralysis unless absolutely necessary and avoiding total paralysis
- conducting periodic maintenance of anesthesia machines and vaporizers and checking the machine and ventilator before administering anesthesia. ❖

—Judith M. Mathias, RN, MA

References

- Adam N, Sebel P S. BIS monitoring: awareness and catastrophic events. *Semin Cardiothorac Vasc Anesth.* March 2004;8:9-12.
- Ekman A, Lindholm, M L, Lennmarken C, et al. Reduction in the incidence of awareness using BIS monitoring. *Acta Anaesthesiol Scand.* January 2004;48:20-26.
- Ghoneim M M. Awareness during anesthesia. *Anesthesiology.* February 2000; 92:597-602.

Lennmarken C, Sandin R. Neuromonitoring for awareness during surgery. *Lancet.* May 2004;363:1747-1748.

Myles P S, Leslie K, McNeil J, et al. Bispectral index monitoring to prevent awareness during anaesthesia: The B-Aware randomised controlled trial. *Lancet.* May 2004;363:1757-1763.

Osterman J E, Hopper J, Heran W J, et al. Awareness under anesthesia and the development of posttraumatic stress disorder. *Gen Hosp Psychiatry.* July-August 2001;23:198-204.

Sebel P S, Bowdle T A, Ghoneim M M, et al. The incidence of awareness during anesthesia: A multicenter United States study. *Anesth Analg.* September 2004; 99:833-839.

Spitellie P H, Holmes M A, Domino K B, et al. Awareness during anesthesia. *Anesthesiol Clin North America.* September 2002;20:555-570.

FDA approves artificial spinal disc

The Food and Drug Administration announced Oct 26 it has approved the first artificial spinal disc. The device, called the Charité artificial disc, made by DePuy Spine was approved for patients who have degenerative disc disease at 1 level from L4-S1 and have had no relief from low back pain after at least 6 months of nonsurgical treatment. The new system, which consists of plastic sandwiched between 2 metal endplates, is inserted in the spine through a small incision just below the belly button. Patients require general anesthesia.

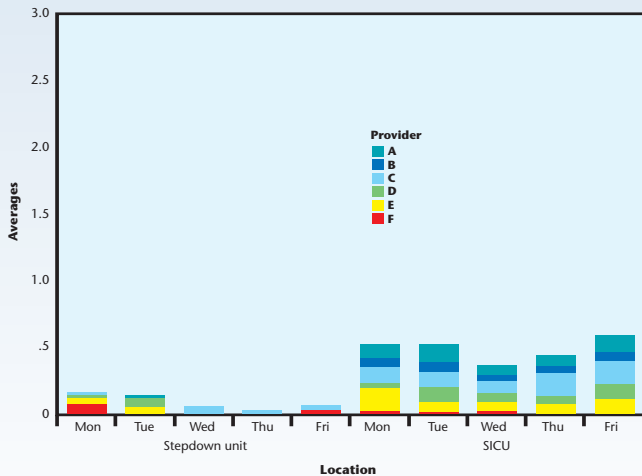
An analyst estimated the discs would take no more than 20% of the lumbar spinal fusion market, and sales would initially be slow because few surgeons have been trained in the operation, according to *The New York Times*. DePuy is expected to have the market to itself for 2 years but could face strong competition in the long run from Medtronic, Synthes-Stratec, and other companies. ❖

—www.fda.gov

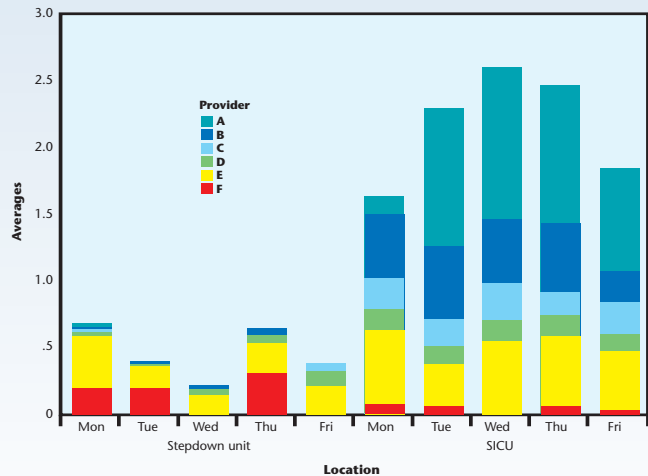
—www.nytimes.com (registration required.)

Cardiothoracic surgery cases on weekdays

Average unscheduled cases



Average scheduled cases



Scheduled cardiothoracic surgery cases had unnecessary peaks during the week, which resulted in peaks in the stepdown unit and the surgical ICU. Because these beds are full, there can be backups in the ER. Source: Boston Medical Center. Reprinted with permission.

Continued from page 1

variability in the scheduled caseload—when elective surgery peaked, so did the number of patients diverted from the ICU.

Say, for example, the cardiac surgeons have block times on Wednesday and Thursday. When those patients come out of surgery, they go to the ICU. Soon those beds are full. There is no more room for patients who come in as emergencies, and the ED is placed on diversion. If the demand for ICU beds is high enough, some surgical patients may need to be held in the postanesthesia unit.

“When you have a peak in elective surgical demand, all of a sudden your resources are being consumed by those patients. You don’t have enough beds to accommodate the medical demand,” Litvak told *OR Manager* in an interview last year. (See November 2003 *OR Manager*.)

Smoothing the elective surgical schedule can avoid these peaks and valleys. Moreover, he has demonstrated that when the schedule is smoothed, surgeons can get more cases done. Nursing costs are reduced because there are fewer surges and less overtime. There also are likely to be fewer errors because clinicians are not as stressed.

“When you leave time open, you increase flexibility.”

Boston Medical Center is a hard test case for Dr Litvak’s theories. As Boston’s safety-net hospital, the 547-bed facility is New England’s largest trauma center. Its ED treats nearly 120,000 patients a year, including many who have been shot or seriously injured in auto accidents.

A problem with lack of beds

BMC’s surgical scheduling project started with vascular surgery. The hospital’s patient flow manager, Janet Gorman, noted the surgical stepdown unit had a problem with a lack of beds, especially on Wednesday and Thursday. The unit cares for patients who are too sick to go directly to the floor and not sick enough to go to the intensive care unit. Patients coming to the unit from the OR were competing with patients coming from the surgical ICU.

Gorman noticed that the vascular service did cases in batches. They might do 4 cases one day and none the next. These were elective cases, not emergent ones, says John B. Chessare, MD, MPH, BMC’s chief medical officer and senior vice president for medical affairs.

Dr Chessare and his team worked with the chief of vascular surgery, James Menzoian, MD, to cap the number of elective vascular surgery patients going to the stepdown unit at 2 per day. In exchange, they offered him more OR time on Monday and Friday and a guarantee his cases would never be bumped.

The result: A smoother flow of cases, and the surgeon has found it easier to get his cases done.

The stepdown unit’s nursing hours per patient day decreased significantly by about 0.5 hours. “The reason is that during the peaks, the unit has to call in extra staff and pay overtime. And during the valleys, the staff has idle time,” Dr Chessare explains. “So by getting rid of the stress, you can reduce costs significantly and get more cases on the schedule.”

Next challenge—cardiac surgery

The next project was cardiac surgery, which had big peaks in the middle of the week. When the team met with the chief

of cardiothoracic surgery, Richard J. Shemin, MD, his first reaction was that emergents were the problem.

Dr Chessare says, "We ran a report that showed it isn't the emergent cases—the emergent cases are sent by God." Over the long run, there is equal probability that an emergency case will come on any day of the week. Instead, the scheduled cases were causing the peaks. (See illustrations.)

To smooth the schedule, the team asked one of the cardiac surgeons to change his clinic day from Friday to Wednesday and do his elective cases on Friday instead of Wednesday.

The 2 projects combined—smoothing the vascular and cardiac surgery schedules—reduced variability in the surgical stepdown unit by 55%. Nursing costs in that unit fell by an annualized amount of \$130,000.

An urgent-emergent room

Building on their success, the team decided to tackle the schedule in the Merino Pavilion where the trauma cases are done. The pavilion, which has 8 ORs and an annual volume of about 6,600 procedures, was plagued by a 20% cancellation rate and 15 to 20 add-ons a day. The schedule was tough on everyone, especially the elective surgery patients.

"Think of the woman who has been waiting 3 weeks for her elective GYN surgery," says Dr Chessare. "Her daughter has flown in from Denver. She has been NPO since midnight. At 10 am, someone walks into her room and says, 'We're sorry, but we have to cancel your case because we've had 3 bad car wrecks.'"

Litvak's research shows that isn't necessary. A hospital can separate its urgent/emergent flow from its elective admissions and have a more predictable schedule. This is accomplished by setting ORs aside each day for urgent/emergent cases.

The first step was to reach a consensus on a definition of urgent and emergent cases. Sometimes an "urgent" case was more for a surgeon's convenience than the patient's medical condition. The team agreed on the following definitions for when surgery must be done:

- Emergent: Within 30 minutes
- Urgent: 30 minutes to 4 hours
- Semi-urgent: 4 to 24 hours
- Nonurgent: >24 hours.

Separating urgent from elective cases

Before

April-September 2003

- 157 emergent cases (Mon-Fri, 7 am to 3:30 pm)
- **334** elective surgical procedures were delayed or canceled.

After

April-September 2004

- 159 emergent cases (Mon-Fri, 7 am to 3:30 pm)
- **3** elective surgical procedures were delayed or canceled (1 canceled, 2 delayed)

Source: Boston Medical Center.

Cases in the first 3 categories would be done in the urgent-emergent room.

After tracking data for several months, the team found they had a choice to set aside 1 or 2 urgent-emergent rooms daily. With 1 room, they would occasionally have to bump an elective case. With 2 rooms, they would never have to cancel an elective case but would have a significant amount of idle time in the second OR. They decided to set aside 1 room.

Blowing up the schedule

When Dr Chessare and Litvak presented that plan, they got a surprising reaction from the pavilion's chiefs of surgery and anesthesia. They said, "As long as we are going to have to take a block away from someone, even though we know they'll be better off, why don't we just blow up block scheduling?" Dr Chessare recalls.

Dr Chessare and Litvak initially were skeptical that they could pull this off. But the chiefs convinced them this would be the right thing to do, saying, "You've taught us the goal is to do more cases and make it easier for the surgeons to get their cases done. We're sure if we have non-block scheduling, those 2 things will happen. We can show them the numbers."

They also promised the surgeons that if they changed the schedule, and the results didn't pan out, they would go back to the old method.

The pavilion now has 1 room for urgent/emergency cases, 5 open rooms, and 2 rooms still blocked for orthopedics. The orthopedic rooms were left blocked because they are used at 100%

capacity, and orthopedic surgeons manage their own bumping due to a lack of surgeons, not ORs.

Results have been dramatic: Delays and cancellations for elective cases fell 99.5% for the period of April through September 2004 compared to the same period in 2003, while the emergency volume stayed almost the same. For the 2004 period, only 3 elective cases were cancelled—compared with 334 elective cases in that period the year before.

"We've also saved the cost of human time, angst, overtime, and the effort to reschedule all of those delayed cases," Dr Chessare says.

Is the message that you are better off without block scheduling?

"You are better off with scientific management," he responds. "The problem with blocks is that when you cut up the time into small segments, you lose flexibility. When you leave the time open, you gain flexibility.

"If the goal is to get more cases done and to make it easier for surgeons to get their cases done, blocks actually make it somewhat harder."

On the other hand, if blocks are fully utilized, and cases aren't constantly being bumped, blocks may work fine, he says.

In practice, surgeons at BMC who maximize use of their block still have their cases scheduled in the same time frames as before, but they don't "own" a block.

"It's not in the hospital's interest either to have a surgeon do 1 case on Monday morning and 3 cases on

Continued on page 12

Hospitals' financial health

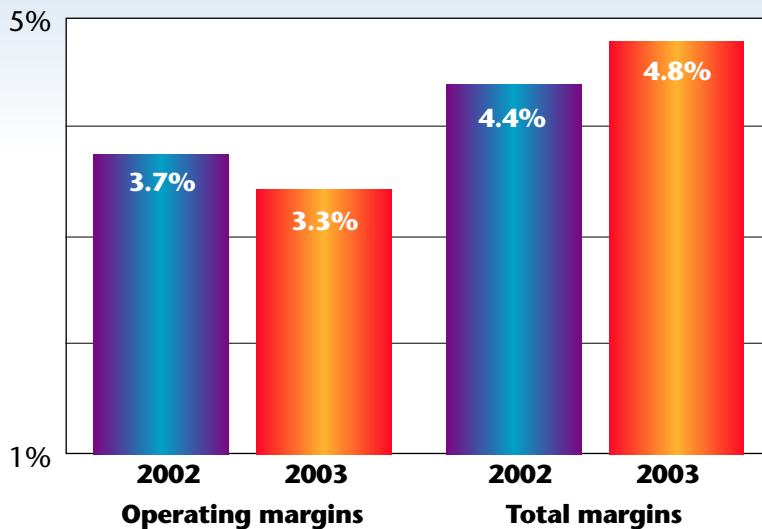
From 2002 to 2003:

- Net patient revenues up ▲ 7.5%
- Total expenses up ▲ 8.0%

In 2003:

- 30% of hospitals lost money overall
- 36% had negative operating margins

Hospital margins:



Medicare paid

95 cents on the \$1

Medicaid paid

92 cents on the \$1

Source: American Hospital Association, AHA Hospital Statistics, 2005. www.AHA.org

Continued from page 11

Tuesday afternoon," he says.

But because surgeons don't "own" blocks, the hospital is free to schedule into that time if it is not used.

In addition to the improved scheduling, BMC has shaved its average wait time in the ED from 60 to 40 minutes and improved its ED throughput by 45 minutes. "When you multiply that 45 minutes times 120,000 patients, it's significant," he says.

Relief for the ER

The *Boston Globe*, in a front-page article this summer, said BMC "is becoming a model of how to bring relief to the nation's beleaguered emergency rooms."

Health care quality guru, Don Berwick, MD, head of the Institute for Healthcare Improvement, Boston, told the *Globe*, "I won't be surprised if 5 years from now, this is the biggest change in health care. We have to bring the science [of management] back into health care in

a way we haven't for a very long time."

Dennis O'Leary, MD, president of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), said, "Anyone who comes to me and says, 'I can't do this,' I'm going to send to Boston Medical Center."

JCAHO is sending the message that patient flow issues need to be actively managed. The commission has adopted a standard for 2005 that will require hospitals to actively address flow problems that cause backups in the emergency room and other units. The standard requires leaders to assess patient flow issues, develop indicators, and plan how to modify processes that may be blocking the efficient flow of patients.

BMC's grant was from the Robert Wood Johnson Foundation's Urgent Matters project, a \$4.6 million grant program intended to reduce emergency department overcrowding. BMC is the only hospital that used its grant money to address the elective surgical schedule as a patient flow issue. ❖

For more information about Boston University's Variability Program, <http://management.bu.edu/research/hcmrc/mvp/index.asp>

References

- Allen, S. Busy Boston Medical Center eases delays by keeping 'customers' moving. *Boston Globe*, July 8, 2004. www.boston.com.
- Litvak E, Long M C. Cost and quality under managed care: Irreconcilable differences? *Am J Manag Care*. March 2000;6:305-312. www.ajmc.com
- Litvak E, Long M C, Cooper A B, et al. Emergency room diversion: Causes and solutions. *Acad Emerg Med*. November 2001;8:1108-110.
- McManus M L, Long M C, Cooper A B, et al. Variability in surgical caseload and access to intensive care services. *Anesthesiology*. June 2003;98:1491-1496. www.anesthesiology.com

New team tames technology requests

What do you do when a surgeon requests high-tech equipment? What process does your OR have for determining whether the new technology would add value to your organization?

A group of 5 hospitals, part of 20-hospital Adventist Health, has developed a structured technology assessment process called the New Technology Team that focuses specifically on costly physician-preference items. The team works with the physicians to analyze technology requests to judge their clinical appropriateness and financial impact.

Making the most of resources

The New Technology Team is being piloted at 178-bed San Joaquin Community Hospital in Bakersfield, Calif, and will be rolled out to the other 4 hospitals in the next year. San Joaquin has 6 ORs and a surgical volume of about 6,000 cases a year. Another 10 ORs are being built.

"We began the process at the bigger hospital where there is a higher number of physician requests and more competition within the community," says Lana Smith, RN, MSN, CNOR, Adventist's director of value analysis. Physicians would go from hospital to hospital requesting items. The hospitals would purchase the same items, resulting in major competition.

The hospitals were seeking a process to guide them in investing in technologies that would make the most of their limited resources for the benefit of patients and the community.

Each hospital already had a Value Analysis Team and a Perioperative Value Analysis Subcommittee. The perioperative subcommittee sends new requests to the New Technology Team. The team's members include the OR director, cardiac cath lab director, interventional radiology director, and staff from the business office as well as the reimbursement, coding, medical records, and contract offices.

"The new team structure adds the financial support needed to achieve the goals of the committee," Smith says.

The team's goals are to:

- assess emerging technologies
- approve only technologies that are viable for the organization

The team is a bridge between the OR director and surgeons.

- allocate limited resources appropriately.

The New Technology Team process follows these steps:

1. A request is received.

The process begins with a request for new technology, which might come from a physician or a sales representative who says a new product will improve patient outcomes or reduce liability.

The department director receives the request, completes a New Technology/Product Request Form, and passes the form to the New Technology Team for review. The role of the team, which meets monthly, is to:

- guide the process
- review requests
- recommend whether to grant requests.

2. The request is screened.

The request is assigned to a screener, who is an RN member of the committee. At San Joaquin, the screener is the cardiovascular service line's special projects coordinator. Smith assists with the screening process.

The screener completes the New Technology Screening Form, calling the physician to get additional information such as:

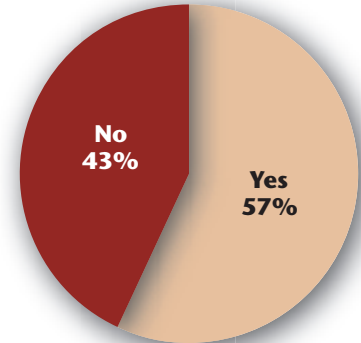
- What is the anticipated annual procedure volume?
- Will the product replace an existing product?
- Is staff training required?
- Is physician credentialing needed?
- Does the product increase costs?

The screener also uses a data collection worksheet to gather information from the vendor and/or purchasing department, such as:

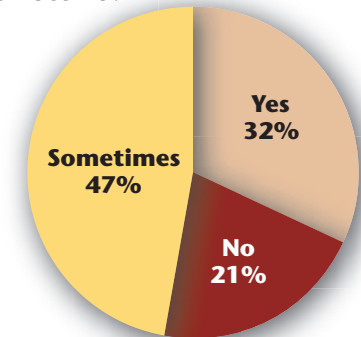
Is value analysis effective?

A recent survey asked materials managers about value analysis.

Do you use value analysis teams?



Are value analysis teams effective?



Source: Association for Healthcare Resource & Materials Management. Performance Indicators Study on Healthcare Surgery Supply Chain Management, 2004. www.ahrmm.org.

- Is the new product on a GPO contract?
- If a product trial is required, will the vendor provide trial supplies at no cost?
- Does the vendor have CPT codes to use for charging?
- If the new product would replace an old product, what is the price of each and the difference?
- Are there any special parts concerns?

The screener may also gather information from coding, contracting, and

Continued on page 14

Continued from page 13

reimbursement staff and a biomedical engineer.

If the equipment is for one-time use, the request is forwarded to the administration for approval. If the product is for ongoing use, and the surgeon wants to conduct a trial, the screener asks the surgeon what the expected response time is for a committee decision.

"We have learned that if we do a trial on a surgeon-request item, the underlying message is that we are probably willing to purchase it. So we want to make sure we are not giving the physician the wrong impression" by approving a trial without committee review, says Smith.

3. Research is consulted.

The team reviews information collected by the screener. Ideally, the team would like to use research evidence to make its decisions. But independent research on new technology often is not available. Many new products haven't been on the market long enough for independent studies to have been done, and most of the research is performed by companies that manufacture the devices.

Smith also networks with other value analysis professionals. She asks if they are using the same product, have done research on it, or have found published reports. She also consults with Premier, their group purchasing organization, and ECRI of Plymouth Meeting, Pa, a non-profit organization that researches health care technology (www.ecri.org).

4. A cost analysis is conducted.

Smith has worked with Adventist's finance staff to develop a cost analysis model. They developed a query that allows them to pull cost information from the hospital's financial database by DRG and ICD-9-CM codes. The model is easy for physicians to understand and gives them detailed information on usage and cost, says Smith, adding that physicians are more likely to believe numbers provided at the procedure level.

The model also enables the team to examine procedure and physician profitability and variability. If they identify significant cost variability among physicians for a procedure, they can begin looking into specific supplies the physicians use.

The team also evaluates reimburse-

“ Surgeons have been positive about the process.” ”

ment by Medicare and private payers, if appropriate.

In addition, the committee analyzes cost avoidance—that is, costs avoided because a surgeon decided not to pursue a piece of equipment. "While we may be increasing costs by purchasing a new technology, we are avoiding some costs by making the decision not to purchase," notes Smith.

For example, after the team looked at the cost, reimbursement, and research related to an expensive stent a physician wanted to use, the physician agreed that the clinical outcomes did not support the additional \$1,916 cost over the current stent.

5. The request is reviewed.

The team reviews the screener's information, any research, and the cost analysis. If the team has the information it needs, it completes a pro forma or return-on-investment analysis. If members have further questions, they may ask the physician to attend a meeting.

The team then recommends whether to approve, deny, or table the request. If the product is approved, the team discusses the impact the product will have on the department. The recommendation is shared with the physician. The team documents its findings on a 1-page New Technology Executive Summary, which goes to the CEO and CFO to keep them informed and make it easier for them to talk to the physicians.

6. Follow-up is conducted.

Once a purchase is made, the team uses a New Technology Monitoring Tool to collect data to compare expected with actual usage and cost.

Recently, the team conducted a follow-up study of the Gyrus PK Tissue Management System, which several gynecologic surgeons requested for use in laparoscopic-assisted vaginal hysterecto-

my. The instruments offer vessel-sealing capabilities that the company says "virtually eliminate the need for sutures, clips, and staples" (www.gyrusgroup.com).

"Our analysis showed this would potentially decrease the cost of the procedure by \$300 to \$500, depending on the number of stapling devices used," Smith says.

In its follow-up, the team noticed that one physician continued to use staplers, whereas if he used the Gyrus, he would have saved about \$13,000. The team asked the vendor to meet with the surgeon and OR director to share this information. Compliance by the other surgeons has been excellent, Smith notes.

Two technology decisions

Two examples of other technologies the committee has considered are cryosurgery for outpatient treatment of recurrent prostate cancer and neurovascular access equipment for treating brain aneurysms.

Cryosurgery uses local induction of extremely cold temperatures and can be done minimally invasively. The equipment is costly, but Medicare offers reimbursement for the procedure.

A nearby cancer center was already performing cryosurgical ablation, and the surgeon estimated he would use it only for a couple of patients a year at the hospital. The team determined that rental of equipment and supplies would cost \$6,800 per patient, while Medicare would pay \$6,400, meaning the hospital would lose money. After the team discussed the pros and cons with the surgeon, he decided to withdraw the request and let the cancer center do the cases.

The review of the neurovascular equipment illustrates how new technology can pull business from one department to another. The surgical department was considering purchasing the equipment, and the neurosurgeons and interventional radiologists sat down to negotiate where the procedure would be performed. Saying they thought the equipment would be a good addition to the hospital, the neurosurgeons agreed the procedure should be done in the radiology department, even though it would take business from the surgeons. Though the procedure is costly, the consensus was to offer it because of the patient benefit. The committee concluded

Continued on page 16

Sizing up your value analysis process

Doing the same thing over and over and expecting different results—that's one definition of insanity. But it also could describe many value analysis teams (VATs).

Are you happy with your value analysis process? Here's a checklist for taking stock of your process provided by Robert Yokl of the HCP Group, Skippack, Pa, who has consulted with health care facilities on value analysis for more than 20 years.

1. Mission, vision, values

Describe the mission, basic role, or purpose of your current value analysis program. Also describe its vision and values. What are the program's principles, standards, and ethics?

2. Cultural commitment

How would you describe your organization's cultural commitment to value analysis?

low medium high board approved

"You have to have senior-level involvement and commitment," says Yokl. "Board-level commitment is true commitment."

3. Structure

Describe your current value analysis structure (administratively and operationally).

Strive for a team approach rather than a committee, Yokl stresses. "Committees in my experience are risk averse, group-think, and have too many friendships involved," he says. He advocates a team-based project management model in which teams have a good mix of members, are not based on friendships, and do not have ownership over products they are looking at. For example, the surgical services VAT would be led by someone from outside surgical services. In one hospital, an ophthalmologist was an effective leader.

Teams typically have 50% clinical and 50% nonclinical members, with half from outside surgical services. "That brings new ideas and cuts down the influence of many of the opinionated members," he says.

Involve physicians on a "just-in-time" basis. Most don't have time to attend reg-

ularly. "We would approach them when we have a proposal for them," he says. If surgeons are regular team members, they should have a role that minimizes their time commitment.

4. Leadership

Describe the leadership of your value analysis program.

"The leader has to be someone the team can model themselves after. The leader is someone who shows up at meetings, is disciplined, follows an agenda, is enthusiastic, welcomes challenges, and holds people's feet to the fire," Yokl says. The leader also keeps everyone on track and makes sure the team has the tools and resources it needs.

5. Policies and procedures

Describe the policies and procedures of your value analysis program.

These are the rules that guide the team. "Our clients' teams develop their own rules, policies, and procedures so they own them," he says.

6. Process

Describe the value analysis process you follow repeatedly to evaluate and select your products, services, and technologies.

"We often see people winging it. They have no defined process. You have to have a repeatable, defined process—step by step," he says. "You need a process that can be audited, measured, and that new members can be trained in."

Too often, the process starts with a product's price or aesthetics. Instead, the process should start with a "blank sheet of paper" that considers a product's functional requirements.

"In many cases, there are alternatives that meet the requirements that physicians will accept but at lower cost."

7. Strategies and tactics

What strategies and tactics is the VAT using to improve the value analysis process?

Two major strategies are:

- **Customization instead of standardization.** Health care organizations have pushed standardization about as far as they can, Yokl says. Instead, they need to use a more functional approach. Pacemakers are much the same except for what is termed "aes-

Value analysis definition

Value analysis is the search for lower-cost alternatives that meet functional needs reliably and consistently.

—Robert T. Yokl

thetics," but they range widely in price from about \$2,500 to \$6,800. One approach is to set up a system to match the type of implant to the individual patient, a strategy Yokl terms "customization," which can result in a lower average cost. Some organizations use a similar approach called demand matching for orthopedic implants; that is, the type of implant is matched to the patient's demand, or lifestyle needs.

- **80-20 rule.** Focus on the 20% of items that result in 80% of the cost. For example, in a custom pack with 28 items, only 2 items may account for most of the cost. The team would focus on the 2 costliest items rather than eking out a few cents on the other 26.

8. Setting priorities

How does the VAT set priorities for savings and quality initiatives?

"You are looking for the best return on investment," Yokl says. The VAT should set priorities on products with the greatest savings potential.

In smaller hospitals, VATs should focus on projects that offer at least \$10,000 in savings. For larger hospitals, projects should yield at least \$20,000 in savings.

"That doesn't mean you ignore lower-cost items. But work on them individually, not as a team," he says.

9. Decision support

How do you ensure the VAT is using a scientifically repeatable process?

Many VATs rely on spreadsheets, but that may not be the best tool. Yokl says spreadsheets often don't capture the data needed, don't follow a consistent format, and often aren't kept to provide a record for the next similar project. A better alter-

Continued on page 16

Continued from page 14

ed the equipment would enhance the hospital's already large neuroscience program and could be used to market the program to the community.

Bridging the gap

Smith, a former OR director, sees the New Technology Team process as a bridge between the OR manager and the surgeon.

"Many of us who have been in the OR know the impact of surgeon requests on our budgets," she says. A surgeon whose request is denied might make an end-run to the administration, which can lead to haphazard decisions.

Physicians' involvement has been invaluable in making the new process successful, and the surgeons have been positive about it. "They see it as an equitable way of determining what to purchase," Smith says.

When surgeons are presented with data and included in the process, they make good decisions, she notes. It is also a good way to keep surgeons informed about the hospital's financial status. ♦

—Judith M. Mathias, RN, MA

The New Technology Team forms are in the OR Manager Toolbox at www.ormanager.com.

Continued from page 15

native is project management software. There are many brands; one example is Microsoft Project, which costs about \$200.

Hospitals with their own decision support software need to make sure VATs have an expert user assigned to write queries to extract the needed data as well as experts who can review the data for accuracy and validity.

10. Measurement

How are you measuring the success of your value analysis program?

- **Objectives.** What are the program's objectives (savings and quality) for meeting its mission and vision?
- **Baseline.** Does the team gather baseline data on its projects so progress can be measured later?
- **Benchmarking.** Benchmarking helps to identify savings opportunities, Yokl says. "With rare exceptions, people aren't doing this. As a result, they're flying blind and spending time in areas where there are no savings. Or they don't dig out the savings that are really there."
- **Targets.** What areas has the VAT targeted in the past 12 months for savings or quality gains? For example, if pacemakers are being evaluated, what is the savings target: \$100,000? \$300,000? "You need a target in each

commodity group, not a shotgun approach," he says.

- **Outcomes.** What have been the VAT's outcomes over the last 12 months in savings and quality? Where did the savings come from: GPO pricing, standardization, value analysis? If the savings didn't meet the target, was the process audited to find out why?

11. Reward and recognition

Describe how you reward and recognize the VAT.

The reward can be something as simple as a thank you letter to VAT members from the president of the hospital, pizza parties, or movie tickets. One team in a large hospital got \$35,000 for a project that saved \$1 million.

12. Evaluation system

How are you evaluating that the value analysis program meets your stated goals and objectives?

Do you have a regular, systematic process for measuring the VAT's progress? Some hospitals include these measures in their data dashboard or Balanced Scorecard. ♦

More information on the HCP Group and value analysis is at www.strategicvalueanalysis.com

FDA denies clearance for some reprocessed single-use devices

Eleven types of reprocessed single-use devices (SUDs) can no longer be marketed, the Food and Drug Administration (FDA) announced Nov 2 after a supplemental review.

The review was carried out under a 2002 law that requires reprocessors to submit additional data on cleaning, sterility, and functionality for certain types of SUDs that had been previously cleared.

The FDA says about 5 reprocessing firms sent in 44 data submissions, some covering a single device and some covering multiple models. Of the 44, 11 were found "not substantially equivalent" to earlier devices or were withdrawn by the reprocessor. Another 19 were found substantially equivalent (can still be marketed), 12 were found substantially equivalent

for some models, and 2 were still under review.

The FDA said it would post the list of devices on its web site Nov 8 along with frequently asked questions. The list will be at <http://www.fda.gov/cdrh/reuse/> (look under Key Topics and FAQs).

The Association of Medical Device Reprocessors (AMDR), a trade group, said reprocessing companies were working with the FDA to see what additional data was required.

Under FDA regulations, third-party device reprocessors are subject to the same regulations as original-device manufacturers. The additional review for certain types of devices is required under the Medical Device User Fee and Modernization Act of 2002 (MDUFMA).

Third-party reprocessors charge that

the additional review was imposed because of lobbying by original manufacturers who oppose reprocessing for economic reasons.

"This is not a patient safety issue," says Pamela Furman of AMDR. "These devices were cleared under the normal 510k process. But because of successful lobbying [by the original manufacturers], they have to meet this extra hurdle."

The FDA also said it would be inspecting reprocessing plants in the near future to review their processes and make sure they were not selling devices that the FDA does not allow to be marketed. AMDR says the FDA has inspected the plants for years, and this is nothing new. ♦

What's right number of inventory turns?

How many times does your OR "turn" its inventory? If you say 4 or less, you are probably losing money and wasting space, experts say. You also could be negatively affecting staff satisfaction and productivity.

If you don't know how many times your department's entire inventory is used and replaced each year, don't fret—you are not alone.

"A large percentage of hospitals know the number of turns in their general stores, but very few know how many (turns) there are on floors and in departments like the OR and cardiac cath lab," says Lisa Ashby, vice president of distribution marketing with Cardinal Health in McGaw Park, Ill, who spoke at the OR Business Management Conference in May in Albuquerque.

"When I think of turns, I see it as just one element of an overall inventory management process. It's a metric of how well you are doing."

While the number of turns in the average-sized hospital differs based on the numbers of beds, the range is about 2 to 8. An average 300-bed hospital averages about 5 turns per year, with the top 25% averaging about 7, according to data collected by Cardinal Health.

"Using a significant volume of any one supply generally means the turns are higher. That is because it's easier to predict what your future usage is, and you have a lower risk of excess or no-move supplies in your inventory," Ashby says.

Smaller institutions generally have a lower procedure volume and may have fewer turns because they do more "just-in-case" stocking. Medium-sized facilities may have a higher turn rate because their higher volumes generally mean more regular supply usage. As hospital beds increase above 400, average turns decline. "Larger hospitals and teaching institutions have more complex cases, and you have to keep many specialized products on hand," Ashby explains.

Calculating turns

Inventory turns can be calculated by taking total supply spending and dividing it by on-hand inventory. For example, if your OR spends \$1 million in supplies and you have on-hand inventory of \$250,000, you have 4 turns a year. In

//
A higher number of turns translates to efficiency.
//

other words, you replace your inventory every 3 months.

But if your OR increased those turns to 8, you would have only \$125,000 in on-hand inventory, which would free up \$125,000 in cash and cut warehouse space in half.

"Cash is a financial barometer," Ashby says. "When you turn your inventory, you are increasing your cash flow that can be used for other purposes."

Taking an accurate on-hand inventory count can be accomplished by using either an automated, or perpetual, inventory management system, or by manually counting supplies. Automated systems include Lawson, PeopleSoft, Oracle, McKesson, or Cardinal's InventoryLink.

"A perpetual inventory is a real-time view of reducing and adding inventory," Ashby says. "We are hearing a lot of people over the last 12 months talk about clinical inventory management options."

To manage inventory supplies on nursing units or in departments, she says hospitals are turning to automated clinical supply systems like Omnicell, Cardinal's Pyxis SupplyStation, or McKesson Automation's SupplyScan.

Automating supply tracking and replenishment is the easiest and best way to make an accurate inventory accounting, she says.

Benefits of higher turns

By increasing inventory turns, ORs can increase cash flow, improve productivity, and reduce the need for large asset locations. "The higher the turns, the less inventory you have on hand, and the more space you have for revenue-generating services," she says.

Improving inventory management can also increase staff satisfaction. When

Calculating inventory turns

Inventory turns = total supply spending divided by on-hand inventory

Example: \$1,000,000 total supply spending / \$250,000 on-hand inventory = 4 inventory turns a year (inventory is replaced every 3 months)

Total inventory value:

Total inventory value = average inventory value per OR x number of ORs + average additional inventory value of specialty ORs (open heart, transplant, pediatrics) x number of specialty ORs

Example: For a 10-room OR department with 2 open-heart rooms, where the average inventory value per OR = \$100,000, and the average additional inventory per specialty OR = \$50,000.

$\$100,000 \times 10 \text{ ORs} = \$1,000,000$
 $\$50,000 \times 2 \text{ specialty ORs} = \$100,000$
 $\$1,000,000 + \$100,000 = \$1,100,000$
total inventory value

Source: Cardinal Health.

staff can get the right product at the right time, they are more satisfied and more productive.

"I have not seen anyone put in inventory controls where the OR has not benefited financially," Ashby says.

For example, one hospital evaluating new inventory management processes found \$3.8 million worth of dead stock in their \$7.8 million on-hand inventory.

"Some had not moved in 6 months, and some had expired. The hospital negotiated a return (of old supplies) to vendors," she says. "There was a lot of money sitting there, and about half of the budget went back to the OR."

Cleaning up inventory

Earlier this year, Christiana Care Health System, Wilmington, Del, hired an outside firm to conduct a physical inventory of its 4 perioperative sites to determine for the first time the number of inventory turns, says Bob Martin, the

Continued on page 18

How to increase inventory turns

Take a physical inventory

A manual physical inventory is the first step for the majority of hospitals that do not have automated supply systems.

"Some ORs do annual physical inventories and compare one year to the next. Some do cycle counting, where they count 20% of (stock) units every week or month," says Lisa Ashby, vice president of distribution marketing with Cardinal Health in McGaw Park, Ill.

When conducting a manual inventory, identify supply areas, establish a process to count products, and set par levels based on usage.

Do an ABC analysis

Do an ABC analysis to rank items in your inventory according to how rapidly they move: A items move the fastest, B items at a moderate pace, and C items the slowest.

"If you increase the inventory turns on the A items, that will increase your overall average turn rate," says Bill Myers, director of materials management for Mission Hospitals, Asheville, NC.

Identify no-move products

Identify products that aren't being used in a certain amount of time. For example, if items are not used in 6 months, they are taken out of inventory.

Increase consignment

Increase the level of items kept on consignment.

"If you don't own it, you don't count it in inventory," Myers says.

Orthopedics is the most common category of supplies kept on consignment. In a recent survey, 51% of materials managers said they keep orthopedic items on consignment, while 13% keep all implants on consignment, and 9% each use consignment for grafts, heart valves, and eye procedures. The survey was conducted by the Association for Healthcare Resource & Materials Management (AHRMM, www.ahrmm.org).

Reduce redundant supply locations

"One of the easiest ways to increase turns is to make sure stocking locations are correct," Ashby says.

Assign a point person

Assign someone with inventory management expertise to carry out the recommendations.

"You need to make par level changes, manage, and facilitate no-move products," she says. "If the OR doesn't assign someone or outsource this function, it will have limited success."

Develop a process

For long-term changes, develop a regular process to manage inventory. "Otherwise 12 to 18 months later, you will go through the same thing," Ashby says.

Continued from page 17

system's supply chain manager for peri-operative services. Christiana operates a 780-bed hospital, a 250-bed hospital, and 2 surgery centers on 2 hospital campuses with a total of 55 ORs.

As of June 30, the number of inventory turns in the ORs was 4.82, and Martin believes the average number of turns can be increased to up to 6 by June 30, 2005.

Freeing up cash flow, reducing the number of supplies on shelves, and improving productivity and staff satisfaction are the biggest goals for the project.

"The OR does a lot of direct purchases. We (materials management) hope to do more of that in the future. This will free up clinical time for the nurses,"

Martin says.

Christiana began its inventory management improvement program in November 2003 by increasing the number of supply deliveries to 5 days per week from 3 days.

Christiana also began using Cardinal's InventoryLink system for wound-closure management. From January 2003 to January 2004, inventory turns for sutures increased to 4.65 from 2.96, Martin says.

"This exceeded our expectations," he says. "We also reduced product lines by 21% by eliminating expired and obsolete products. Most importantly, we reduced the number of stat calls for those products by 91%."

Over the next year, Martin says Christiana hopes to reduce the amount of supplies in "unofficial locations" in the ORs.

"The OR nurses have been on board with this project," Martin says. "The nursing leadership wants (supply) managed and cleaned up. They are expensed for these supplies in their budgets."

Hospitals can learn from industry

Surveys show that the hospital industry is inefficient when compared with other businesses. For example, hospital ORs average about 4.8 turns per year compared with 23 for the automobile industry, 15.4 for the petroleum industry, 5.3 for apparel, and 8 for pharmaceuticals, according to the Center for Inventory Management, Stone Mountain, Ga.

"The higher number of turns translates to how efficient you are with managing inventory assets and cash investments," Ashby says.

A study published in December 1999 by the management firm Pittiglio Rabin Todd & McGrath in Waltham, Mass, found US companies have dramatically improved their inventory turns. Ashby says those improvements have continued with increased automation.

US inventory turns rose by more than 12% from 1994 through 1998 to an average of 5.4 annual turns, according to the report. During the same period, the average cash-to-cycle time—the number of days between paying for supplies and getting paid for the product or service—improved by 10% to 100 days, the report stated.

Computer companies like Dell Computer Corp have turnover rates that range from 30 to 40 times per year. Turns are especially important for price-competitive industries like automobiles and electronics or those with low margins.

Increasing inventory turns generally results in one-time savings.

"If you get up to 8 turns, the optimum, you shrink your inventory. You can have large, one-time savings from inventory reduction. But capital savings can accrue over the years, and your ongoing impact is productivity and staff satisfaction improvements," Ashby says. ♦

—Jay Greene

Jay Greene is a freelance writer in St Paul, Minn.

Please see the ad for
MEGADYNE
in the *OR Manager* print version.

How a small hospital trimmed its inventory

A small California hospital trimmed its inventory by 22% after participating in a national supply chain project.

In the 9-month project, Simi Valley Hospital, a 197-bed facility in Ventura County north of Los Angeles, reduced its inventory from about \$560,000 to \$435,000 and saved about \$160,000 in supply costs.

To keep inventory management on track, the hospital agreed to hire a dedicated surgical supply coordinator.

"What we accomplished was not high tech. It was basic business management," says Bob Reefman, director of materials management.

Simi Valley participated in Premier's Supply Chain Collaborative Breakthrough Series. The project, which ran from September 2003 to May 2004, involved teams from 38 Premier member hospitals.

Inventory moves to front burner

A chief benefit was that the project moved inventory management to the front burner.

"We found the discipline of the breakthrough project gave us the boost we needed," Reefman says. "We knew what we needed to do, but it didn't always hold our attention. The breakthrough project forced us to follow through." The team set a goal of reducing inventory by \$140,000.

As part of the Breakthrough Series, the team attended a national conference, kept in touch with other participants by e-mail, and learned quality improvement techniques, including Plan-Do-Study-Act.

"The breakthrough process taught us that instead of tackling the whole problem, you pick a small area, test a change, then apply it to broader areas," he says. The team was expected to submit regular reports, which helped keep the project focused. The team also included the perioperative manager and outpatient clinic manager, which meant everyone needed to make improvements was at the table.

When the project began, surgical inventory had not been well controlled because no one was dedicated to the task. "Because we didn't have a dedicat-

“
**Having a goal
and tracking
progress made
it work.**
”

ed supply person, each nurse or technician would requisition whatever supplies they thought they might need and whatever the doctor asked for," Reefman says.

There was no magic to reducing inventory, just methodical attention, he says.

The first target was hemodialysis catheters. The team began by listing all of the catheters on hand. Then they talked to the nurses and physicians and found two-thirds were not being used.

"We got the doctors to agree on one product line," Reefman says. "We were able to return many of the ones on hand for credit."

From there, the team moved on to vascular grafts, urological supplies, and suture. As they completed each category of supplies, they updated master files in the materials management information system.

New supply coordinator

A major outcome of the project was justifying a position for a surgical supply coordinator, which wasn't a slam-dunk.

"We really had to campaign for a full-time person," Reefman says. One argument the team made was to compare the higher volume and expense of surgical supplies with supplies used on medical-surgical units. Yet med-surg units had more materials management personnel dedicated to managing their inventory.

Another thing that helped was to share the position between the 3-room main OR and the hospital's 3-OR free-standing ambulatory surgery center.

Willow Lee, a surgical technologist, is the supply coordinator. She is assigned to materials management duties full time and cannot be pulled for clinical duties.

She sets par levels; orders, receives, and stocks supplies; and keeps the inventory organized.

"Once we had the supply coordinator, we were able clean up and organize the surgical storage area," Reefman says. The department purchased new bins and uses a simple barcode system with handheld scanner to track inventory and see what needs to be ordered. The scanner docks to a desktop computer and prints out orders.

Unfortunately, the barcode system does not interface directly with the materials management information system, but this simple system is a time saver, Reefman says. Otherwise, the coordinator would have to fill out order sheets, which would then need to be entered into the system.

Being part of the Breakthrough Series helped Simi Valley move forward. "The ongoing structure of having a goal and tracking our progress made it work," he says. ❖

Higher infection risk with donated blood

Patients who had their blood managed by a method other than blood transfusion were less likely to have an infection after surgery, according to a new study. The study compared outcomes for patients who receive donated blood and those whose blood was managed in other ways, such as reinfusing a patient's own saline-washed blood.

"The risk of getting an infection after surgery was almost twice as likely in patients who received blood transfusions," said Arye Shander, MD, of Englewood Hospital and Medical Center, Englewood, NJ, who conducted the study. "The immune system can be significantly affected by the transfusion, leading to infections and other conditions."

Transfusions can be avoided by a combination of medications, devices, and other techniques. The study was presented at the American Society of Anesthesiologists meeting in October in Las Vegas. ❖

Tracking inventory the wireless way

Using a handheld, wireless personal digital assistant (PDA) scanner, materials management supply handler Jerry Ledoux spends about 2 1/2 hours every night taking inventory in the perioperative department at 396-bed Dartmouth-Hitchcock Medical Center, Lebanon, NH.

As hospitals like Dartmouth-Hitchcock seek to create more efficient ORs and improve patient care, materials managers like Ledoux are using radiofrequency PDAs to scan barcode labels of supplies and transmit the data to the hospital's wireless local area network (Integrated 802.11b WLAN). The network is also part of the materials management information system.

"This (wireless supply) system saves us a lot of time and improves the accuracy of our counts," says William Grimes, manager of materials management information systems at Dartmouth-Hitchcock.

In a 2004 survey, 72% of health care information technology executives say they have implemented wireless systems in their hospitals, according to the 15th Annual Leadership Survey by the Healthcare Information and Management Systems Society (HIMSS) and sponsored by Superior Consultant Company. In addition, 55% of the executives plan to implement PDAs and 54% plan to implement barcoding technologies in the next 2 years, the survey showed.

Daily inventory counts

In September 2001, Dartmouth-Hitchcock began using wireless PDAs to conduct daily inventory counts for its ORs, Grimes says. "We were ahead of the curve, but now many people are telling me they are using these systems," he says. Dartmouth's PDAs—iPAQ Pocket PCs and Symbol PPT 8800s—also are used to record supplies when they are delivered to the receiving dock. Dartmouth-Hitchcock uses PeopleSoft supply chain software with an Oracle database.

"It is a big job to resupply 20 ORs," says June Brown, the hospital's OR supply manager. "It used to take 3 people (nursing assistants). Now we have 1 (materials management supply handler) dedicated to the OR during the 9:30 p.m. to 6 a.m. shift. My guy is ordering supplies all night long."

Supplies in the OR are located in several areas, including the ORs, clean core, the warmers, and the storeroom, Brown

says. The OR averages 58 inpatient and 100 outpatient cases per day.

Here is how it works. When Ledoux enters a supply area, he scans a barcode label that instantly displays all supplies located in the room.

"The label says he is in room 28," Brown says. "(Ledoux) looks in drawers and shelves and knows by experience whether you

need to scan and count. If it looks like there's enough, he skips over it."

If he notices a depleted supply item, Ledoux scans the items present, and the materials management system automatically generates a purchase order to replenish the items to par levels. This system generates faster data so orders can be created more quickly, eliminating the lag time of batch processes.

Making room for new ORs

Consolidating supplies helped to reduce inventory in the OR by 50% and opened up space for other uses, Brown says.

"By removing unnecessary supplies from the clean core area and reducing the size of the supply area by two-thirds, the OR was able to add 2 OR suites," Grimes says. "This increased revenue to the OR."

Doug Heavisides, OR administrative director, says nurses are happy with the mobile restocking system.

"It frees up nursing staff to take care of patients," Heavisides says. "The 3 nursing assistants (who used to restock) were hired to do patient care. Now, in a matter of hours, all the shelves are scanned, and the carts come up for supply replenishment. This speeds up the process. We don't have overstocking or understocking."

The materials management department also is working with the perioperative department to automate resupply of implants, screws, and sutures. Currently, nursing staff keeps track of and orders supplies, and nobody knows the exact amount needed on hand, he says.

"We have a quasi-automated system



Jim Hutt, OR materials management supervisor, checks inventory.

now for (nonstock items), but we will be switching over to the wireless system (within 6 months)," Heavisides says. Currently, nurses use OR computers to record sutures, implants, and screws into the patient bill.

"When the case is finalized, the computer generates a purchasing requisition downstairs," he says. "We make mistakes, and implants sometimes don't get documented and reordered. When we look for an implant, sometimes it isn't there."

Wireless systems also save money by helping to eliminate costly "panic orders." "Panic orders used to happen in 2 ways," says Grimes. "First, nurses tended to overorder so they didn't run out. Another way was when the OR needed something the next day, nurses ordered through Federal Express to get it overnight. At \$20 to \$30 per shipment, you can run through a lot of cash."

Now that the OR has gone wireless, Grimes says, "We've been able to decrease the panic orders."

The cost for implementing a wireless data collection system depends on whether the hospital already has a wireless clinical information system, Grimes says. Individual PDAs cost about \$1,000 each, and a server costs about \$2,000.

"Wireless technology doesn't cost much once the infrastructure is in place," Grimes says. "You can't sell a hospital on a wireless system just for materials management. But it works very well when it is piggybacked onto a larger system." ♦

—Jay Greene

Jay Greene is a freelance writer in St Paul, Minn.

OR managers gather in Chicago

The Blue Train is the team of cyclists who took turns leading and following Lance Armstrong, supporting him in his drive to an unprecedented sixth victory of the Tour de France.

Gail Avigne, RN, BA, CNOR, brought members of her Blue Train to her acceptance of the OR Manager of the Year award. Avigne was honored at the Managing Today's OR Suite conference Oct 6 to 8 in Chicago.

"No one could keep up that pace without the team," said Avigne, manager of the OR and related areas at Shands Hospital at the University of Florida, Gainesville. "They fly like geese. They take turns being in the lead. If one falls behind, they go back and get him."

The conference attracted 829 OR managers for 3 days of seminars, general sessions and breakouts. Attendees took time to visit the 83 exhibitors during the trade show.

Trust your heart

Leading off the conference, psychiatrist and specialist in mind-body-spirit medicine, Carl Hammerschlag, MD, urged the audience "to trust the heart and soul of who you are and not just science and technology.

"If you're going to deal effectively, your feet have to be planted in truth." His keynote was sponsored by Kimberly-Clark Health Care.

Learning from Everest

The 1996 disaster on Mount Everest killed 5 climbers, including 2 of the world's most skilled expedition leaders.



What lessons can health care leaders take away?

"Beware of the root cause—think systems," said Michael Roberto of the Harvard Business School in a talk sponsored by the J2 Group Inc.

Comparing the Everest disaster to health care, he gave the example of a child who receives a lethal dose of morphine from a misprogrammed pain pump. Such an error may have 30 different factors—a new type of pump, the wrong label, a pharmacist who didn't catch the error, a nurse who wasn't adequately trained on the new equipment, and so forth.

"Mistakes aren't inevitable if you have a good team," Roberto said. Downplaying status and having team members who know each other are 2

Steve Lundin, author of the best-seller Fish!, talked about bringing spirit into work.

Above, top: OR Manager of the Year, Gail Avigne (second from left), gave credit to her team.

Above, left: "There is at least as much to be learned from the heart as from the head," said psychiatrist Carl Hammerschlag in his keynote.

Above, right: Speaker Amanda Gore got the audience involved with her ideas for recognizing and energizing the staff.

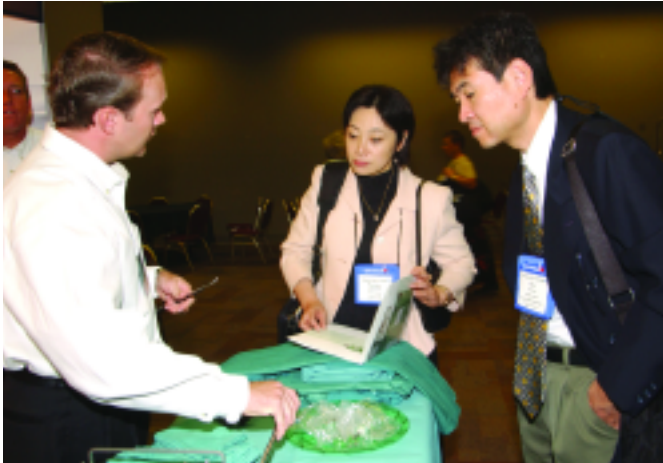
things that make a difference.

"Do your teams have psychological safety where it is safe to admit a mistake?" he asked the audience.

"Drop your potatoes"

Australian Amanda Gore delighted the audience with her message to let go and lighten up. Many people, she said, drag their problems around like a bag of potatoes. Even when the potatoes rot and

Managing Today's OR Suite



*Clockwise from top left:
Attendees from China talk with a vendor.
Attendees had the chance to network during the conference.
Suzanne Richins taught financial management skills.
Michael Roberto shared leadership lessons from Mount Everest's deadliest day when 5 climbers died and others barely escaped with their lives.*

start to smell, they refuse to drop the bag. "You have to drop your potatoes," she admonished, in the special presentation and reception sponsored by Cardinal Health.

A Fish! tale

Steve Lundin, PhD, co-author of the business best-seller, *Fish!*, introduced the audience to leadership lessons learned from workers at the Pike Place Fish Market in Seattle, who bring spirit to their work, at a luncheon talk sponsored by Advanced Sterilization Products. The book tells the story of a young woman who took a job as head of a notoriously hard-to-manage department and learned 4 lessons from the fishmongers:

- Choose your attitude
- Play
- Make their day—through small acts of kindness
- Be there—be fully present for customers and co-workers.

Illustrating the "be there" principle, he showed a touching video about a 90-

year-old patient who was unresponsive. One day, one of the staff began spending time in the man's room quietly playing his clarinet. Slowly, the man began to respond. Before long, he was moving his arms to keep time with the music.

In search of soul

In a moving closing address, Mary Murphy, RN, BSN, CNOR, director of surgical services at Munson Medical Center in Traverse City, Mich, told how she found her way back from burn-out. After the death of her daughter and an exhausting job at a large urban med-

Mary Murphy played the harp as the audience gathered for her closing address.



ical center, she took at position as head of a 2-room OR at a small hospital in northern Michigan, bought a home on the river, "and spent a year searching for my soul." As part of her journey, she helped found a program in mind-body-spirit medicine. She also rediscovered a childhood love of music. She played her harp as a prelude to the session.

"Take time to be quiet—take time to find your mission and your purpose," she said. ❖

References for Everest talk

Michael Roberto, DBA, professor at the Harvard Business School, who spoke at the Managing Today's OR Suite conference in October in Chicago, requested that these references from his talk be printed in *OR Manager*.

His talk focused on leadership lessons learned from the 1996 Everest disaster, in which 5 mountain climbers died, including 2 of the world's most experienced high-altitude guides. Roberto may be contacted at mroberto@hbs.edu.

References

Edmondson A C, Roberto M, Tucker A. "Children's Hospital and Clinics." Harvard Business School. Case 302-050.

Roberto M A. Lessons from Everest: Interaction of cognitive bias, psychological safety, and system complexity. *Calif Manage Rev*. Fall 2002;45(1):136-158.

Edmondson, A. Speaking up in the operating room: How team leaders promote learning in interdisciplinary action teams. *J Manage Stud*. September 2003;40:1419-1452.

Tucker A, Edmondson A. Why hospitals don't learn from failures: Organizational and psychological dynamics that inhibit system change. *Calif Manage Rev*. Winter 2003;45(2):55-72.

Tucker A, Edmondson, A C. Managing routine exceptions: A model of nurse problem-solving behavior. *Adv Health Care Manage 3*. 2002:87-113.

Edmondson A C, Bohmer R, Pisano G P. Disrupted routines: Team learning and new technology adaptation. *Adm Sci Q*. December 2001;46:685-716.

Edmondson A C, Bohmer R, Pisano G P. Speeding up team learning. *Harv Bus Rev*. October 2002;79(1):125-134.

Check our web site
for the latest news, meeting
announcements, and other
practical help.

www.ormanager.com

Doctors who get sleep make fewer mistakes

Medical interns make far fewer mistakes when their hours are restricted so they get enough sleep, finds the first study to directly examine this issue.

The study of 24 interns on a rotation in the ICU, published in the *New England Journal of Medicine*, found those who were restricted to working no more than 16 hours without a break made about one-third fewer serious errors that could harm patients.

—Lockley S W, et al. *NEJM*. Oct 28, 2004;351:1829-1837. www.nejm.org
—www.washingtonpost.com

California governor proposes lowering nurse-to-patient ratios

Gov Arnold Schwarzenegger's administration has proposed scaling back some nurse-to-patient ratios imposed on California hospitals in January. California is the first state to mandate ratios.

The administration cited the heavy financial burden on hospitals, according to the Nov 5 *Los Angeles Times*.

The law set standards for the maximum number of patients each nurse is allowed to care for by patient unit. For example, in the OR, each patient should have 1 nurse. In a med-surg unit, 1 nurse may care for 6 patients.

California's director of health services suggested that ERs be exempt from the ratios when they have an unexpected increase in patients. She also proposed that the state delay implementing a second phase of the law, which would drop the nurse-to-patient ratio in med-surg units to 1:5 next year.

Eleven California hospitals say nurse-to-patient staffing ratios contributed to their decisions to close or reduce services.

In Los Angeles County, 5 public hospitals said they cannot fully comply with the ratios. County officials say they need 1,200 more nurses to comply, and requirements are met most of the time by bringing in traveling nurses.

Two nursing unions, the California Nurses Association and the Service Employees International Union, criticized the governor's proposal and accused him of being more concerned with hospital profits than patient safety.

—www.latimes.com

Nursing salaries made gains in 2004

The overall average annual income for nurses in 2004 was \$54,574, significantly higher than the \$49,634 reported in 2003 and about \$10,000 higher than 2001, according to *Nursing2004's* annual survey published in its October issue.

Perianesthesia nurses earned the most, averaging \$59,400, followed by RNs in obstetrics/gynecology/nursery units at \$59,200. The biggest gains were by nurses in outpatient and clinic settings, whose average pay jumped from \$44,100 to \$57,700, an increase of 31%.

Nurse managers, supervisors, and administrators averaged \$67,100 per year, up from last year's \$58,900.

—www.nursing2004.com

Nursing faculty salaries lag behind clinical nurses'

Nursing faculty earned an average of \$52,000 in 2004. That is less than the average salaries reported by advanced practice nurses at \$72,400, nurse managers at \$67,100, nurse case managers at \$56,700, and charge nurses at \$54,700, according to the annual *Nursing2004* salary survey. Some 1,480 nurses responded to the survey, which was published in the magazine's October issue; 1% of respondents were faculty.

—www.nursing2004.com

Nurse pleads guilty to five deaths

A 35-year old former ICU nurse agreed to plead guilty to 5 counts of neglect in connection with the deaths of 5 patients she cared for in 2002 and 2003. The deaths took place at Shady Grove Adventist Hospital in Rockville, Md. Two patients were in their late 60s, and 2 were in their early 80s; the age of the fifth patient could not be determined.

Among the charges are that the nurse took patients off their respirators and injected larger than ordered doses of morphine, which hastened death.

Each of the counts carries a maximum sentence of 5 years in jail, but prosecutors agreed not to seek consecutive sentences as part of the plea deal, according to the Oct 28 *Washington Post*.

—www.washingtonpost.com

Ambulatory Surgery Centers

Making value analysis work in an ASC

A surgeon comes to your supply coordinator and says, "I need this new type of disposable stapler." Another surgeon hands a nurse a brochure and says, "I just saw this at a meeting. We need to get one." A sales rep has been talking to your staff about trying his company's new product.

There's a way to bring order to the tough-to-control process of supply and equipment purchasing.

Value analysis, used in business for more than 50 years, can help ambulatory surgery centers (ASCs) make purchasing decisions in a systematic, objective way, says Dawn Q. McLane, RN, MSA, CASC, CNOR. McLane, who is vice president for operations for Aspen Healthcare, a Niwot, Colo.-based consulting firm, developed a value analysis process when she was director of a surgery center that performed 10,000 procedures a year.

The value analysis process is guided by a value analysis team (VAT) that:

- sets purchasing objectives and priorities
- receives and analyzes requests
- makes decisions based on whether products meet the ASC's clinical and financial objectives.

Classic value analysis determines

Is this a clinically and financially responsible purchase?

the customer's requirements and matches them with products, services, and technologies that meet those requirements. It entails not only acquiring new products but also eliminating current ones that don't meet requirements. Value analysis goes beyond the usual purchasing tasks of reviewing GPO contracts, negotiating prices, and approving product requests, notes Robert T. Yokl of the HCP Group, Skippack, Pa, an expert in health care value analysis.

Typically, says McLane, a VAT in an ASC includes the clinical and business managers as well as physicians representing key specialties who operate at the center. (For more on VATs, see pp 13-16.)

The primary advantage of value

analysis is that the physician owners become actively involved in decisions about supplies and equipment, she notes.

"Having physicians on the committee adds to the credibility of decisions. It also means the management team doesn't always have to be the bad guy if requests are denied," she says. "I never saw the board go against a decision of the value analysis committee."

Examples of issues an ASC's VAT might consider are:

- the purchase of capital equipment
- a change in brands of suture or endomechanical devices
- the selection of a distributor or group purchasing organization
- whether to engage a company that reprocesses single-use devices
- monitoring results of purchasing decisions to see that products provide the intended outcomes and pricing.

The team also authorizes product trials. McLane advises having a policy that does not permit trials unless they are authorized by the VAT. That prevents products from being brought in for an informal trial and ending up on the shelf without a thorough review.

Value analysis steps

Value analysis in an ASC typically includes the following steps, McLane says:

1. Products are selected for review.

Items to be addressed by the committee are selected by the center's executive director, clinical director, or materials manager. These may be based on physician requests or opportunities managers are exploring to reduce expenses.

2. Information is gathered.

The materials manager or another designated person researches the

Continued on page 26

Ambulatory Surgery Advisory Board

Gwendolyn Grothouse, RN
Administrative director
Apple Hill Surgical Center
York, Pa

Barbara Harmer, RN, BSN, MHA
Senior consultant
HealthCare Consultants, Inc
Celebration, Fla

Jerry Henderson, RN, MBA, CNOR, CASC
Executive director
The SurgiCenter of Baltimore
Owings Mills, Md

Diana Procnjar, RN, BA, CNOR
Nurse administrator
Winter Haven Ambulatory Surgical Center
Winter Haven, Fla

Donna Gelardi-Slosburg, RN, BSN, CASC
National surgery specialist
HealthSouth
St Petersburg, Fla

Rhonda Tubbe, RN, CASC, CNOR
Administrator
The Surgery Center of Nacogdoches
Nacogdoches, Tex

Continued from page 25

options by meeting with company representatives, searching the literature, interviewing physicians, and gathering other information.

3. A financial analysis is conducted.

A financial analysis is performed to examine:

- the item's purchase price
- the volume of procedures in which the item will be used
- whether disposable products or accessories are required and their cost
- indirect costs, such as additional labor and supplies for reprocessing
- reimbursement for the procedure
- payback time for capital equipment.

The analysis should include an analysis of whether the ASC's reimbursement for the procedure in which the new product will be used is sufficient to cover the added cost.

4. A proposal is prepared.

The materials manager meets with the ASC's executive and clinical director to prepare an agenda and proposals for presentation to the VAT.

"The information should be presented as thoroughly and succinctly as possible to keep the meetings short and the physicians interested in participating," McLane says.

Physicians are reminded of the meeting 2 to 3 days beforehand. Physicians who have privileges at the center may attend as guests if an item they are interested in is on the agenda. Physicians may also be invited to make a presentation if the committee needs more information.

5. The VAT considers the proposal.

At the VAT meetings, the agenda is followed and minutes are taken. The team votes on the proposals that are up for consideration. Examples of criteria for evaluating purchases include:

- performance of the product
- efficiency (eg, setup and reprocessing time)

Value analysis: Sample policies and procedures

Title

Product Evaluation and Selection for Patient Care

Purpose

To provide guidelines for the evaluation and selection of products and equipment used for perioperative patient care.

Guidelines

1. Products to be evaluated for use in the patient care setting should be safe, meet identified needs, and promote quality patient care.
 - a. Product evaluation and selection are based on a collaborative approach.
 - b. The role of the clinical director includes initiating, coordinating, and/or participating in the clinical evaluation of a product.
 - c. The materials specialist, clinical engineering, and manufacturer representatives should be resources for information concerning new or existing products to meet identified clinical needs.
2. A mechanism for product standardization evaluation should be implemented through a committee with clearly defined responsibility and authority.
 - a. The objective of this group is to facilitate the acquisition of standardized, quality, cost-effective products to promote quality patient care.
3. Product evaluation is based on objective criteria specific to the product, its functions, and its use in the practice setting.
 - a. Evaluation criteria include but are not limited to:
 - performance
 - efficiency
 - cost, only after quality standards are met
 - safety
 - standardization.
4. A trial clinical evaluation is conducted prior to selection of a product.
 - a. Trial evaluations should be initiated because of an identified need or concern.
 - b. Literature should be reviewed and products screened prior to conducting a clinical evaluation.
 - c. The executive director or designee should be notified in a timely manner when a specific trial is requested and will arrange an appropriate trial with the manufacturer's representative. Unauthorized trials will not be permitted.
 - d. All clinical areas that are affected (in a substantial way) should be represented in the trial evaluation.
 - e. Limits should be placed on the scope of the clinical trial, including but not limited to:
 - the number of products to be evaluated
 - time span
 - the number of clinical units involved.
 - f. Instruction and demonstration of a product for all involved personnel should be conducted before a clinical trial evaluation is begun.

Source: Aspen Healthcare. Reprinted with permission. www.aspenhc.com

- safety
- consistency with the ASC's standardization efforts
- whether the product is covered by a group purchasing contract
- cost, but only after quality standards are met.

Essentially, says McLane, the question is: "Is this a clinically and financially responsible purchase for the center?"

The VAT may recommend purchasing or not purchasing the item, table the request, or request more information. Minutes are prepared, reviewed by the executive or clinical director, approved by the VAT, and presented to the ASC's governing board.

The board considers the VAT's recommendations and either approves or asks for additional information. The decision is not implemented until the board approves the decision. ❖

Sample ASC value analysis guidelines and policies and procedures are in the OR Manager Toolbox at www.ormanager.com

Have an idea?

Do you have a project or accomplishment you'd like to see reported in *OR Manager*? Send an e-mail with your idea to Pat Patterson, Editor, at ppatterson@ormanager.com.

Please see the ad for
TVL HEALTHCARE INC.
in the *OR Manager* print version.

OR Manager Subject Index 2004

VOLUME 20

—Index by Mary Walsh, MLS

Key: (HP) Health Policy & Politics
(WP) Workplace

ACCREDITATION

Accountability for new JC IC standards, Jan: 13
Ambulatory care safety goals, Mar: 33
Assessing competence Q & A, Aug: 22
JCAHO 2005 Patient Safety Goals, Sep: 5
JCAHO: Prevent anesthesia awareness, Dec: 1
JCAHO surgical fire goals, Nov: 26
JCAHO tracer method, May: 28
Medical staff JC standards, Jan: 17
Ready for no-knock survey?, Nov: 19
Safety goals tested for 2005, Jun: 5
Tracer method review, Nov: 20

AMBULATORY SURGERY

Ambulatory care safety goals, Mar: 33
ASC Salary/Career survey-managing, Oct: 33
ASC Salary/Career survey-staffing, Sep: 17
Assuring escorts at ASCs, Mar: 29
Benchmarking in ASCs-overview, Sep: 29
Better postop pain relief, Jan: 24
Coding with modifiers, Apr: 24
Data drives QI projects, Nov: 24
Hospital outpatient payments, Dec: 5
Improving consent recall, Jun: 25
JCAHO surgical fire goals, Nov: 26

JCAHO tracer method, May: 28
Lap choles pain control, Jan: 27
Liposuctions exceeding guidelines, Jul: 28
Medicare bill impact on ASCs, Jan: 23
New benchmark data for ASCs, Feb: 29
Patient deaths and policies, Aug: 28
Payment for implants, Aug: 26
Sleep apnea safety, Feb: 25
Up to speed on HIPAA security?, Jul: 25
Value analysis in ASC, Dec: 25
Weight limits for ASC patients?, May: 26

ANALGESIA

COX-2 inhibitor improves outcomes, Jan: 21

ANESTHESIA

Editorial, Jun: 3
JCAHO: Prevent anesthesia awareness, Dec: 1
Joint statement on propofol, Jul: 27
Propofol dispensing in GI labs, Oct: 24
Regional anesthesia trends, Jun: 1

ANTIBIOTICS

Consensus on antibiotic use, Nov: 7
Prophylactic antibiotics process, Feb: 1

ATTIRE

Laundrying scrubs at home, May: 21

BAR CODING

"Smart" wristbands tested, Sep: 24

BENCHMARKING

Benchmarking in ASCs-overview, Sep: 29

Data drives QI projects, Nov: 24
New benchmark data for ASCs, Feb: 29

BOOK REVIEWS

Internal Bleeding (review & interview), May: 17

BUSINESS

Counterfeit products blocked, Feb: 7
Feds probe GPOs, Oct: 5
Hospital margins flat (WP), Feb: 24

CDC (CENTERS FOR DISEASE CONTROL & PREVENTION)

CDC sharps guide online, Apr: 18
Contaminated knee graft, Jan: 10
Draft of isolation guideline issued, Jul: 24
Rabies in organ transplants, Aug: 25
Tissue safety advice from CDC, Aug: 20

CERTIFICATION

Multilingual tech exams (WP), May: 24

CHANGE

Editorial, Jan: 3
Nurses find change hard (WP), Oct: 30
QI with "Six Sigma", Jun: 1

CODING

Coding for spinal cases, Aug: 15
Coding with modifiers, Apr: 24

COMMUNICATION

Listening to staff is key, Mar: 1
Patient tracking systems, Jan: 1

COMPETENCE

Assessing competence Q & A, Aug: 22

OR Manager Subject Index 2004

COMPUTERS & SOFTWARE

Instrument tracking, Mar: 17
Patient tracking systems, Jan: 1

CONSCIOUS SEDATION - SEE SEDATION

COSTS & COST CONTROLS

Cost varies in gastric bypass, Jul: 1
Editorial, Feb: 3
Editorial, Nov: 3
Gain control of spinal surgery costs, Feb: 1
Less costly drugs help nausea, Aug: 5
Orthopedic implant costs, Oct: 32
Spine program lessons, Aug: 14
Tame technology requests, Dec: 13
What drives labor costs?, Feb: 18
Size up value analysis process, Dec: 15

DESIGN & CONSTRUCTION

OR construction-survey, Oct: 18
"OR of the Future" features, Jun: 18
Trends in OR construction, Mar: 1

DEVICES - SEE SUPPLIES & EQUIPMENT

DIABETES

Glucose control reduces infection risk, Jun: 22

DISPOSABLES & REUSABLES

FDA denies clearance for devices, Dec: 16

ECONOMICS

Modest budget increase proposed (HP), Apr: 30

EDUCATION

BSN required in NY? (WP), Mar: 37
Clinical Nurse Leader degree, Nov: 21
Educate periop staff in-house, Nov: 18

Enrollments up, not enough (WP), Jan: 20

Nurse educator campaign (WP), Apr: 29

Nursing camp (WP), Aug: 24
Periop Education Pipeline program, Sep: 21

EFFICIENCY - SEE PRODUCTIVITY

EMPLOYMENT

Call plan boosts morale, Jan: 22
Clinical ladder boosts morale, Sep: 1
Editorial, Oct: 3
Foreign-born RNs increase (WP), Jan: 20
Foreign nurse trends (WP), Aug: 24
"Hardy nurses" resilient, Sep: 22
Keeping mature staff, Nov: 1
Milwaukee uses nurse pools (WP), Mar: 37
"New Vision" on diversity (WP), Nov: 22
Nurse killings spark reforms (HP), Feb: 28
Nurses from Mexico (WP), Aug: 24
Pay for surgical techs (WP), May: 24
Periop Education Pipeline program, Sep: 21
RN demand tops list (WP), Apr: 29
RN turnover at 15.5% (WP), Mar: 37
Salary/Career survey-staffing, Sep: 1
Talent pool is shrinking, Oct: 1
WV mandatory overtime (HP), Apr: 30

ERGONOMICS

ANA unveils campaign (WP), Jan: 20
Saving nurses' backs (WP), Sep: 28

ERRORS - SEE TREATMENT ERRORS

ETHICS

Counterfeit products blocked, Feb: 7

FDA (FOOD & DRUG ADMINISTRATION)

Counterfeit products blocked, Feb: 7
FDA denies clearance for some devices, Dec: 16
Stapler incident reports urged, Jan: 6

FIRES

JCAHO surgical fire goals, Nov: 26
Safety goals tested for 2005, Jun: 5

FIRST ASSISTANTS

Certification eligibility expanded (WP), Apr: 29
Change assistants pay, GAO says, Mar: 7
Congress calls for payment study (HP), Feb: 28

FORECASTING

"Off-shoring" more workers (WP), Aug: 24

GASTRIC BYPASS

Bariatric surgery scrutinized, Jul: 10
Cost varies in gastric bypass, Jul: 1
Gastric bypass benchmark data, Oct: 11
NY bypass guidelines, Jul: 9

GUIDELINES

Liposuctions exceeding guidelines, Jul: 28

HAIR REMOVAL

Changing preop hair removal, Jan: 11
—correction, May: 24

HIPAA (HEALTH INSURANCE PORTABILITY & ACCOUNTABILITY ACT)

National Provider Identifiers (HP), Mar: 38
Up to speed on HIPAA security?, Jul: 25

HOSPITALS

Aid to immigrant patients (HP), Sep: 34
CMS clarifies moratorium (HP), May: 30
Competition for core business, May: 20
More contract labor (WP), Oct: 30
Pressure on not-for-profits (HP), Oct: 38
Reporting infection measures (HP), May: 30
"Safest hospital" in the nation, Jul: 1
Specialty hospitals battle (HP), Mar: 38
Storm pay in Florida (WP), Nov: 22
Uncompensated care soars (HP), Apr: 30

INFECTION CONTROL

Accountability for new JC IC standards, Jan: 13
Barrier selection standards, May: 9
Bloodborne pathogens rules widened (HP), Jul: 30
Changing preop hair removal, Jan: 11
—correction, May: 24
Glucose control reduces infection risk, Jun: 22
Inactivating prions, Nov: 23
Infection rates cut, Jan: 1
Prophylactic antibiotics process, Feb: 1
Reps in the OR?, Feb: 22
TB protection in question (HP), Mar: 38
Warming prevents infections, Apr: 1

INFORMATION SYSTEMS

Information systems-survey, Oct: 18

INFORMED CONSENT

Improving consent recall, Jun: 25
Reality-TV informed consent, Jun: 27

INNOVATION

"OR of the Future" features, Jun: 18
Trends in OR construction, Mar: 1

INSTRUMENTS - SEE SUPPLIES & EQUIPMENT

JOB SATISFACTION

Call plan boosts morale, Jan: 22
Clinical ladder boosts morale, Sep: 1
CS techs recognized, Jul: 18
Job satisfaction-survey, Oct: 21
Keeping mature staff, Nov: 1
Listening to staff is key, Mar: 1

JOINT COMMISSION

Accountability for new JC IC standards, Jan: 13
Ambulatory care safety goals, Mar: 33
Assessing competence Q & A, Aug: 22
JCAHO 2005 Patient Safety Goals, Sep: 5
JCAHO: Prevent anesthesia awareness, Dec: 1
JCAHO surgical fire goals, Nov: 26
JCAHO tracer method, May: 28
Medical staff JC standards, Jan: 17
Ready for no-knock survey?, Nov: 19
Safety goals tested for 2005, Jun: 5
Tracer method review, Nov: 20

LABOR UNIONS

Overtime rules debated, Jun: 7
—correction, Jul: 30

LAPAROSCOPIC SURGERY

Lap choles pain control, Jan: 27

LAW & LEGISLATION

Checking references, Apr: 1
Congress fails on overtime pay (HP), Feb: 28
GPO oversight bill (HP), Nov: 29
Move to modify staffing ratios (WP), Feb: 24
Overtime rule not blocked (HP), Jul: 30
Overtime rules debated, Jun: 7
—correction, Jul: 30
Overtime rules in effect (WP), Oct: 30
Stark II and the OR, Jul: 17
Testimony limited to nurses (WP), May: 24
Workforce funds on hold (HP), Feb: 28

LEADERSHIP

Mary Murphy shares, Aug: 7
OR Manager of the Year, Oct: 7

MANAGEMENT

ASC Salary/Career survey-managing, Oct: 33
Build cross-generation workforce, Sep: 11
Checking references, Apr: 1
Clinical ladder boosts morale, Sep: 1
Editorial, Apr: 3
Editorial, Jul: 3
Improving performance (part one), Mar: 25
Improving performance (part two), Apr: 20
Perioperative director reports to?, Aug: 1
Talent pool is shrinking, Oct: 1

MATERIALS MANAGEMENT - SEE SUPPLIES & EQUIPMENT

MEDICARE

Change assistants pay, GAO says, Mar: 7

Subject Index 2004

Competition for Medicare payments?
(HP), Oct: 38
Council on Technology & Innovation (HP), Oct: 38
Covering more services, drugs (HP), May: 30
Hospital outpatient payments, Dec: 5
Hospitals get relief (HP), Feb: 28
Medicare bill impact on ASCs, Jan: 23
Outpatient payment update (HP), Sep: 34
Proposed payment expansion (HP), Nov: 29
Stark II and the OR, Jul: 17
Stark II regs (HP), May: 30

MEDICATION ERRORS – SEE TREATMENT ERRORS

MEETINGS

Business Conference highlights, Jul: 12
OR managers gather in Chicago, Dec: 22

NAUSEA

Less costly drugs help nausea, Aug: 5

NEEDLES

CDC sharps guide online, Apr: 18
New guide to safer sharps, May: 22

NURSING SHORTAGE

Talent pool is shrinking, Oct: 1

OBESITY

Bariatric surgery scrutinized, Jul: 10
Editorial, May: 3
Equipment for obese patients, May: 15
Planning for heavier patients, May: 1
Safe mobility for obese, May: 12
Weight limits for ASC patients?, May: 26

OCCUPATIONAL HAZARDS

“Lift teams” bill in CA (HP), Oct: 38

OPERATING ROOMS

“Golden Scalpel” awards-survey, Oct: 22
Manage block time in OR, Nov: 1
Managing supply cabinets, Nov: 15
Med errors harm patients, Feb: 9
“OR of the Future” features, Jun: 18
Stark II and the OR, Jul: 17
Trends in OR construction, Mar: 1

OR BENCHMARKS

Cost varies in gastric bypass, Jul: 1
Four procedures being studied, Mar: 22
Gastric bypass benchmark data, Oct: 11
What drives labor costs?, Feb: 18

OR MANAGERS

Bariatric equipment needs (HP), Jul: 30
Business Conference highlights, Jul: 12
Editorial, Sep: 3
Facing gaps in surgical schedule, Aug: 1
Keynote journeys to healing, Apr: 5
Lessons from climbing disaster, May: 7
OR Manager of the Year, Oct: 7
OR Managers gather in Chicago, Dec: 22
Perioperative director reports to?, Aug: 1
QI with “Six Sigma”, Jun: 1
Salary/Career survey-salaries, Oct: 1
Salary/Career survey-staffing, Sep: 1

ORTHOPEDICS

Big cost increases (WP), Feb: 24
COX-2 inhibitor improves outcomes, Jan: 21
Good outcomes for total knee, Feb: 5
Orthopedic implant costs, Oct: 32
Recruitment up in orthopedics (WP), Aug: 24

OUTCOMES - SEE QUALITY

PAIN

Better postop pain relief, Jan: 24
COX-2 inhibitor improves outcomes, Jan: 21
Lap choles pain control, Jan: 27
Regional anesthesia trends, Jun: 1

PATIENT SAFETY

Ambulatory care safety goals, Mar: 33

Please see the ad for
ROWAN REGIONAL MEDICAL
in the *OR Manager* print version.

OR Manager Subject Index 2004

- Assuring escorts at ASCs, Mar: 29
Internal Bleeding (review & interview),
May: 17
JCAHO 2005 Patient Safety Goals,
Sep: 5
JCAHO surgical fire goals, Nov: 26
Liposuctions exceeding guidelines,
Jul: 28
Marking for spinal surgery, Jan: 9
Med errors harm patients, Feb: 9
Patient safety bill action (HP), Nov: 29
Planning for heavier patients, May: 1
Safe mobility for obese, May: 12
"Safest hospital" in the nation, Jul: 1
Safety goals tested for 2005, Jun: 5
Sleep apnea safety, Feb: 25
"Smart" wristbands tested, Sep: 24
Tissue handling Q & A, Aug: 18
Tissue safety advice from CDC, Aug: 20
Who marks the site?, Jan: 7
- PHYSICIANS**
Competition for core business, May: 20
Sleep means fewer errors (WP), Dec: 24
Malpractice costs hamper access (WP),
Jul: 16
MD behavior issues (WP), Oct: 30
Medical staff JC standards, Jan: 17
Overuse of spinal fusion?, Apr: 7
Residents work limits (WP), Sep: 28
Specialties with most profit, Nov: 21
Workload increases (WP), Jul: 16
- POLICY**
Assuring escorts at ASCs, Mar: 29
- POLITICS**
Speaker on managing politics, Mar: 5
- POST ANESTHESIA CARE UNIT**
Regional anesthesia trends, Jun: 1
Warming prevents infections, Apr: 1
- PRODUCTIVITY**
Manage block time in OR, Nov: 1
Managing equipment assets, Feb: 16
Orientation for travelers, Feb: 20
Patient tracking systems, Jan: 1
Patient-flow eases crowding, May: 5
- PROGRAM PLANNING**
Improving performance (part one),
Mar: 25
Improving performance (part two),
Apr: 20
Spine program lessons, Aug: 14
- QUALITY**
Business Conference highlights, Jul: 12
Data drives QI projects, Nov: 24
Editorial, Mar: 3
Good outcomes for total knee, Feb: 5
Improving performance (part one),
Mar: 25
Improving performance (part two),
Apr: 20
QI with "Six Sigma", Jun: 1
Report on nurse's impact, Aug: 17
- RECRUITMENT & RETENTION – SEE
EMPLOYMENT**
- REIMBURSEMENT**
Hospital outpatient payments, Dec: 5
Orthopedic implant costs, Oct: 32
Payment for implants, Aug: 26
- RESEARCH**
Infection rates cut, Jan: 1
- REUSE – SEE DISPOSABLES &
REUSABLES**
- ROBOTICS**
Robot could scrub in, Mar: 9
- SAFETY – SEE ALSO PATIENT SAFETY**
New guide to safer sharps, May: 22
Safety goals tested for 2005, Jun: 5
Suction canister waste options, Apr: 16
- SALARIES & BENEFITS**
Explaining salary variances, Aug: 12
Overtime rules debated, Jun: 7
—correction, Jul: 30
Nursing faculty salaries (WP), Dec: 24
Nursing salary gains (WP), Dec: 24
Salary/Career survey-salaries, Oct: 1
Salary/Career survey-staffing, Sep: 1
- SCHEDULING & UTILIZATION**
Adjusting block time, Nov: 11
Errors linked to long hours, Aug: 17
Facing gaps in surgical schedule, Aug: 1
Family-friendly scheduling (WP),
Sep: 28
Manage block time in OR, Nov: 1
Patient-flow eases crowding, May: 5
Perils of shiftwork outlined (WP),
Nov: 22
Smoothing elective surgery schedule,
Dec: 1
- SEDATION**
Joint statement on propofol, Jul: 27
Propofol dispensing in GI labs, Oct: 24
- SENTINEL EVENTS - SEE TREATMENT
ERRORS**
- SKILL MIX**
OR skill mix-survey, Oct: 15
- STAFFING**
ASC Salary/Career survey-staffing,
Sep: 17
Bidding on work shifts (WP), Feb: 24
CA governor proposes lowering ratios
(WP), Dec: 24
CA upholds staffing ratios (WP), Jul: 16
Explaining salary variances, Aug: 12
Facing gaps in surgical schedule, Aug: 1
National nurse staffing bill (HP),
Apr: 30
Orientation for travelers, Feb: 20
Salary/Career survey-staffing, Sep: 1
Senior staff friendly policies, Nov: 13
What drives labor costs?, Feb: 18
- STANDARDS**
Barrier selection standards, May: 9
Reps in the OR?, Feb: 22
- STAPLING**
Stapler incident reports urged, Jan: 6
- STERILIZATION & DISINFECTION**
Alert on scope processing, Nov: 5
CS techs recognized, Jul: 18
Inactivating prions, Nov: 23
Instrument tracking, Mar: 17
Solving case cart errors, Jul: 20
- STRESS**
Keeping managers sane, Jun: 8
Quiet rooms for nurses (WP), May: 24
- SUPPLIES & EQUIPMENT**
Equipment for obese patients, May: 15
Feds probe GPOs, Oct: 5
Instrument tracking, Mar: 17
Inventory turns, Dec: 17
Managing equipment assets, Feb: 16
Managing supply cabinets, Nov: 15
Position paper on loaners, Jun: 23
Size up value analysis process, Dec: 15
Small hospital trims inventory, Dec: 20
Stapler incident reports urged, Jan: 6
Tame technology requests, Dec: 13
Value analysis in ASC, Dec: 25
Wireless inventory tracking, Dec: 21
- SURGERY**
Gain control of spinal surgery costs,
Feb: 1
Overuse of spinal fusion?, Apr: 7
- SURGICAL INSTRUMENTS**
Solving case cart errors, Jul: 20
- SURGICAL SITE**
Fine-tuning site marking, Feb: 28
Fine-tuning site verification, Jan: 8
Marking for spinal surgery, Jan: 9
Who marks the site?, Jan: 7
- SURVEYS**
ASC Salary/Career survey-managing,
Oct: 33
ASC Salary/Career survey-staffing,
Sep: 17
"Golden Scalpel" awards-survey,
Oct: 22
Information systems-survey, Oct: 18
Job satisfaction-survey, Oct: 21
OR construction-survey, Oct: 18
OR skill mix-survey, Oct: 15
Salary/Career survey-salaries, Oct: 1
Salary/Career survey-staffing, Sep: 1
Talent pool is shrinking, Oct: 1
- TEAMS & TEAMBUILDING**
CS techs recognized, Jul: 18
"Fish!" fuels meaning, Jul: 5
- TECHNOLOGY**
New guide to safer sharps, May: 22
Robot could scrub in, Mar: 9
"Smart" wristbands tested, Sep: 24
Tame technology requests, Dec: 13
- TISSUE BANKS**
Tissue handling Q & A, Aug: 18
Tissue safety advice from CDC, Aug: 20
- TREATMENT ERRORS**
Editorial, Aug: 3
Internal Bleeding (review & interview),
May: 17
Med errors harm patients, Feb: 9
Patient deaths and policies, Aug: 28
Voluntary error reporting (HP), Sep: 34
- UNIFORMS**
Laundering scrubs at home, May: 21
- VENDORS**
Instrument tracking, Mar: 19
Reps in the OR?, Feb: 22
Spinal implant fraud, Jan: 5
- WARMING TECHNIQUES**
Warming prevents infections, Apr: 1
- WASTE DISPOSAL**
Suction canister waste options, Apr: 16
- WRONG SITE - SEE SURGICAL SITE**

Please see the ad for
INTEGRATED MEDICAL SYSTEMS
in the *OR Manager* print version.

At a Glance

Fewer canceled cases with preop clinic

Patients seen in a preoperative clinic before the day of surgery were much less likely to have their cases cancelled on the day of surgery—7.7% compared with 19.1% in a new study from the University of Chicago. That was true even though patients seen beforehand tend to be sicker and have more complex surgery than patients who do not come into the clinic.

The study involved about 4,000 patients seen in the last 6 months of 2003. Though increasing the number of patients who come to a preop clinic could enable an OR to operate more efficiently, insurers don't reimburse separately for that, notes the author, David Glick, MD. "Hopefully, studies such as this one will open the eyes of government and private payers that presurgical evaluations are worth paying for," he says.

The study was presented at the American Society of Anesthesiologists meeting in October in Las Vegas.

—www.asahq.org

Favorite movie helps patients get through surgery

Patients who were able to watch a favorite flick while under regional anesthesia were more comfortable and required less medication, a new study finds.

Patients used a system that allowed them to watch a movie through goggles worn throughout the operation.

"The aim of the study was to create an environment that is more pleasing for patients, making the experience more positive and less traumatic," says the researcher, Akash Bajaj, MD, of Harbor-UCLA Medical Center. He says every patient that used the device was satisfied, and all the patients said it was a positive experience. Watching a DVD of their choice gave patients something else to focus on besides the surgery.

The study included 2 groups: one that watched a movie and one that did not. Though both groups were comfortable during the surgery, the movie-watching group used less anesthetic medication.

The study was presented at the American Society of Anesthesiologists meeting in October in Las Vegas.

—www.asahq.org

Bypass surgery declining, new report finds

The volume of coronary artery bypass operations is flattening or decreasing, while the volume of angioplasties is soaring, notes a new report on the 100 top cardiovascular hospitals by Solucient. The introduction of drug-eluting stents in the US last year is expected to accelerate the trend, the Oct 25 *Modern Healthcare* reported.

In 2003, the benchmark hospitals performed an average of 166 bypass procedures, down 11% per hospital from 2002. Meanwhile, the top 100 hospitals performed 436 angioplasties in 2003, a 7% increase from 2002.

Though cardiac surgery patients are sicker than ever, more are surviving surgery, with the top 100 hospitals leading the trend. The top 100 also are 35% less likely to have postoperative infections. Their cardiovascular-related costs were also 13% lower than peer hospitals.

—www.solucient.com

Are cardiac interventions safe without surgery backup?

A new study raises serious questions about whether facilities without surgical backup should do percutaneous coronary interventions (PCI) for patients with ST-elevation myocardial infarction (MI). The need for emergency surgery is small (1% or less). There has been pressure to expand PCI to more hospitals after studies showed improved outcomes compared with thrombolysis.

But a new study in *JAMA* found a 29% higher mortality rate in patients having PCI in hospitals without surgical backup. After adjusting for baseline differences, mortality rates tended to be slightly better (but not significantly so) for primary PCI in hospitals without onsite surgery, but mortality for those treated after day 1 was 38% worse in those same hospitals. The study "does not prove that the proliferation of programs without surgical backup must stop, but their findings are provocative and demonstrate the need for more data," says a *JAMA* editorial. ❖

—*Wennberg, D E et al. JAMA. Oct 27, 2004;292:1961-1968. www.jama.com*



P O Box 5303
Santa Fe, NM 87502-5303

Periodicals