

**Take credit for reading
OR Manager!**

Earn continuing education
credits by completing
a brief online post-test.

See p 26 for details.

Inside OR Manager

POSTOPERATIVE OUTCOMES

Sleep apnea tied to higher risk
of postoperative complications,
greater use of hospital
resources 5

PERFORMANCE IMPROVEMENT

Tracking tool streamlines sched-
uling, enhances communication
with surgeons' offices 14

PERFORMANCE IMPROVEMENT

Improving instrument readi-
ness cuts case delays, boosts
surgeon satisfaction 17

STERILIZATION & INFECTION CONTROL

Are you correctly using
rigid sterilization
containers for IUSS? 21

OR BUSINESS PERFORMANCE

Changes in nurses' pay struc-
ture solve staffing and
scheduling problems 24

Ambulatory Surgery Centers

Decisions, decisions: Should
you outsource coding to
comply with ICD-10? 28

Patient safety

Rounding tool off to a good start in improving patient satisfaction

A mobile, web-based round-
ing tool is allowing the
perioperative leadership
team at Vail Valley Medical Cen-
ter (VVMC) in Vail, Colorado, to
collect, analyze, and report on
information gathered from sur-
geons, staff, and patients to im-
prove quality of care and move
toward high reliability.

Software designed by My-
Rounding Solutions in Little-
ton, Colorado, was customized
to VVMC and downloaded into
an iPad (www.myrounding.com). Icons and simple naviga-
tion menus make rounding, data
gathering, and tracking of trends
simple.

"MyRounding is so great be-
cause it is so portable, and the
software is very easy to use and
navigate through, whether you
are computer literate or not,"
notes Mary Jo Steiert, BSN, RN,
CNOR, director of perioperative
services at VVMC.

VVMC is a community hospi-
tal with 4 rooms in its main OR,
4 rooms in its adjoining surgery
center, and 4 rooms in its surgery
center in Edwards, Colorado,
which is 4 miles from Vail. VVMC
also includes the Steadman Clinic,
a world-renowned orthopedic
clinic, and the Steadman Philip-

Continued on page 6

Care coordination

Team participation and planning produce quality handoffs

A fter a poor handoff from
the OR to the postanesthe-
sia care unit (PACU) was
identified as the culprit behind
a serious adverse event, Nancy
Robinson, DNP, MSN, RN,
LHRM, CCM, made it her mission
to avoid a recurrence.

"I'm passionate about safe pa-
tient hand-offs," says Robinson.
"I didn't want this to happen to
another patient."

Robinson, who is director of ed-
ucation at Health Central Hospi-
tal, Ocoee, Florida, part of the Or-
lando Health System, tackled the

project of improving handoffs as
her doctorate in nursing capstone
project, working closely with Mar-
cia Olieman, MBA, RN, director of
surgical services. The result was
a tool that has boosted OR and
PACU nurse satisfaction and is
still being used 2 years later.

In 2006, the Joint Commis-
sion launched a National Patient
Safety Goal for implementing
standardized handoffs, and in
2013, the Commission's Center for
Transforming Healthcare released

Continued on page 10

Less aborts is more productive.

V-PRO maX can increase productivity and decrease cost for the sterile processing department by providing more reliable performance and greater flexibility.

- Low sensitivity to moisture minimizes aborted cycles*
- Plasma free process eliminates the need for a coil that can contribute to aborted cycles
- Process a flexible endoscope AND non lumened load up to 24 pounds in just 35 minutes

V-PRO[®] maX
Low Temperature Sterilization System

To learn more about V-PRO maX, call 800-548-4873 or visit steris.com

For information about the 3000+ devices that can be sterilized in V-PRO maX, visit steris.com/products/vpro



 **STERIS**

SENIOR VP/GROUP PUBLISHER
Jennifer Schwartz • 301-354-1702
jschwartz@accessintel.com

PUBLISHER, DEFENSE AND HEALTHCARE
Thomas A. Sloma-Williams • 301-354-1696
tawilliams@accessintel.com

EDITOR
Elizabeth Wood • 301-354-1786
ewood@accessintel.com

CLINICAL EDITOR
Judith M. Mathias, MA, RN

CONTRIBUTING WRITER
Paula DeJohn

WEBINAR COORDINATOR
Connie Sunderhaus, RN-BC, CCM

TRADE SHOW DIRECTOR
Sharon Morabito

ART DIRECTOR
David Whitcher
dwhitcher@accessintel.com

SENIOR PRODUCTION MANAGER
Joann M. Fato • 301-354-1681
jfato@accessintel.com

ADVERTISING

National Advertising Manager
Ashley W. Kerwin
Account Executive, OR Manager
301-354-1814
akerwin@accessintel.com
Fax: 301-340-7136

REPRINTS

Wright's Media
877-652-5295 • sales@wrightsmedia.com

Vol. 30, No. 3, March 2014 • *OR Manager* (ISSN 8756-8047) is published monthly by Access Intelligence, LLC. Periodicals postage paid at Rockville, MD and additional post offices. POSTMASTER: Send address changes to *OR Manager*, 4 Choke Cherry Road, 2nd Floor, Rockville, MD 20850. Super subscription (includes electronic issue and weekly electronic bulletin) rates: \$209 (plus \$10 shipping for domestic and Canadian); \$20 shipping for foreign). Single issues: \$29. For subscription inquiries or change of address, contact Client Services, clientservices@accessintel.com. Tel: 888-707-5814, Fax: 301-309-3847. Copyright © 2014 by Access Intelligence, LLC. All rights reserved. No part of this publication may be reproduced without written permission.

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

Access Intelligence, LLC

Chief Executive Officer
Don Pazour

Executive Vice President & Chief Financial Officer
Ed Pinedo

Exec. Vice President, Human Resources & Administration
Macy L. Fecto

Divisional President, Access Intelligence
Heather Farley

Senior Vice President, Chief Information Officer
Robert Paciorek

Senior VP, Corporate Audience Development
Sylvia Sierra

VP, Production, Digital Media & Design
Michael Kraus

Vice President, Financial Planning and Internal Audit
Steve Barber

Vice President/Corporate Controller
Gerald Stasko



4 Choke Cherry Road, Second Floor
Rockville, MD 20850 • www.accessintel.com

Editorial

Efforts to increase patient safety have been successful in some areas, but less so in others—notably, postoperative outcomes—according to a recent study.

Researchers who analyzed Medicare Patient Safety Monitoring System data for the period 2005 through 2011 found declines in adverse event rates for patients hospitalized because of acute myocardial infarction (MI) or congestive heart failure. However, this was not the case for patients hospitalized for pneumonia or because they needed surgery.

Among the more than 61,000 patients at more than 4,300 hospitals included in the analysis, the mean age of surgical patients was about 75 years vs 80 years for patients with heart problems, but even the 5-year age difference didn't confer an advantage.

The number of adverse events related to infections and drugs declined among patients with acute MI or congestive heart failure, but rates of infection-related and postprocedural adverse events increased significantly among patients undergoing surgery. Likewise, pressure ulcers increased in surgical patients but not appreciably in medical patients.

Why did surgical patients fare worse?

The data in this study provide food for thought rather than clear-cut answers to this question. The authors point out that heart conditions have been the focus of numerous national initiatives to improve care. Isn't the same true for surgery?

Programs like the American College of Surgeons National Surgical Quality Improvement Program, the Surgical Care Improvement Project, and the Surgical Infection Prevention Project, for example, have been in place for many years. And many organi-

zations have managed to reduce readmission rates, gain compliance with use of surgical safety checklists, and achieve other milestones on the path to greater patient safety.

Despite the apparently disappointing trends among surgical patients described in this study, progress is being made—and must continue to be made—especially with the ever-steeper penalties for missteps in the OR.

Patient safety is the underlying theme of many *OR Manager* articles, and this issue is no exception. For example, there's a new study that raises awareness about postoperative complications associated with sleep apnea (p 5). Other articles describe the benefits of a new rounding tool, an improved system for hand-offs, and important guidelines for proper immediate-use steam sterilization.

We hope articles like these inspire you to adopt best practices at your facilities. If you have an innovation you'd like to share, please let us know; our goal is to help you help each other.

Within a month or so, many of you will receive the *OR Manager* Annual Salary/Career Survey. This year's survey has been streamlined to reduce the time needed to complete it, and we urge you to take a few moments to do so. Between now and then, please give some thought to the last question on the survey: What steps have you taken or will you take in 2014 to increase patient safety and satisfaction while still meeting your revenue goals? ♦

—Elizabeth Wood
ewood@accessintel.com

Reference

Wang Y, Eldridge N, Metersky M L, et al. National trends in patient safety for four common conditions, 2005-2011. *N Engl J Med*. 2014;370(4), 341-351.



**THE POWER OF MAQUET:
COMPREHENSIVE PRODUCTS
AND THERAPEUTIC SOLUTIONS**

MAQUET
GETINGE GROUP
MAKE-A-WISH.

TRADITIONAL O.R. • CATHETERIZATION LAB • HYBRID O.R.
MAQUET – The Gold Standard.

- VASOVIEW HEMOPRO® Endoscopic Vessel Harvesting
- CARDIOSAVE® / SENSATION PLUS® IAB Therapy
- CARDIOHELP System
- MIRA-I CS System for Minimally Invasive Cardiac Surgery
- ACROBAT® System for Off-Pump Cardiac Surgery (OPCAB)
- TIGERPAW® System II
- VARIOP Modular Wall System
- YUNO OTN and MAGNUS® Surgical Tables
- POWERLED® Surgical Lighting
- MODUTEC® Ceiling Supply Units
- TEGRIS OR Integration System
- FLOW-I Anesthesia System®
- HEMASHIELD®, HEMAGARD®, and CARDIOROOT® Vascular Grafts
- ClearWay™ RX Local Drug Infusion Balloon Catheter and Xpress-Way™ RX Extraction Catheter
- Atrium OASIS™ Chest Drain and EXPRESS™ MINI Chest Drain

MAQUET will donate \$250 to Make-A-Wish® for any single purchase order of \$50,000 or more (before tax, shipping and install) received between March 1, 2014 and February 28, 2015, with a minimum guaranteed contribution of \$50,000, up to a maximum of \$150,000. For more information about Make-A-Wish visit wish.org.

MAQUET and MAQUET are registered trademarks of MAQUET Getinge. VASOVIEW, HEMOPRO, HEMASHIELD, and CARDIOROOT are registered trademarks of MAQUET Getinge. TIGERPAW is a U.S. registered trademark of LIAO, Inc. MIRA-I CS and ACROBAT are registered trademarks of Endovascular Treatment Systems. CARDIOSAVE, SENSATION PLUS, and ACROBAT are trademarks of Acorn Medical Corporation. TEGRIS is a registered trademark of MAQUET Getinge. CLEARWAY is a registered trademark of MAQUET Getinge. Xpress-Way is a registered trademark of MAQUET Getinge. Atrium OASIS is a registered trademark of MAQUET Getinge. EXPRESS is a registered trademark of MAQUET Getinge. MAQUET Getinge is a registered trademark of MAQUET Getinge. MAQUET Getinge is a registered trademark of MAQUET Getinge.

Sleep apnea tied to higher risk of postoperative complications, greater use of hospital resources

Obststructive sleep apnea is a major clinical and economic challenge in the postoperative period, affecting up to one-fourth of patients undergoing elective surgical procedures. The prevalence among orthopedic patients having joint arthroplasty may be especially high because obesity is a widespread comorbidity in this patient population. Obesity is 1 of the top risk factors for sleep apnea.

Despite these concerns, however, there is little information on the effect of sleep apnea on postoperative complications and resource utilization in orthopedic surgical patients.

This study, led by researchers from the Hospital for Special Surgery, New York City, assessed the association between sleep apnea and outcomes in patients who had total hip or knee arthroplasty in 400 US hospitals between 2006 and 2010.

Of 530,089 patients included in the analysis, 8.4% overall had a diagnosis of sleep apnea. The prevalence of sleep apnea increased from 6.2% in 2006 to 10.3% in 2010.

Increased odds for adverse outcomes

In multivariate analysis, the diagnosis of sleep apnea emerged as an independent risk factor for major postoperative complications (odds ratio [OR] 1.47).

In patients with sleep apnea:

- pulmonary complications were 1.86 times more likely to occur
- cardiac complications were 1.59 times more likely to occur
- mortality was 1.27 times more likely.

Increased resource utilization

In addition to increased odds for adverse outcomes, the researchers

found an effect of sleep apnea on increased resource utilization.

Sleep apnea patients were more likely to:

- receive ventilatory support—mechanical ventilation (OR 10.26), noninvasive ventilation (OR 29.04)
- use intensive care (OR 1.85)
- use telemetry and stepdown services (OR 1.64)
- consume more economic resources (OR 1.13)
- have longer lengths of stay in the hospital (1.16).

The findings show that obstructive sleep apnea was associated with higher rates and odds of postoperative complications, utilization of resources, and length of stay, the authors say. More research is needed to identify sleep apnea patients at risk for complications and develop evidence-based practices to assist in the allocation of clinical and economic resources.

In an accompanying editorial, Francis Chung, MBBS, FRCPC, from the Toronto Western Hospital, University Health Network, Toronto, Ontario, Canada, a noted authority on obstructive sleep apnea, and Babak Mokhlesi, MD, MSc, from the University of Chicago, point out that this rate of complications provides strong evidence that “we need better guidelines for improving the care of patients with sleep apnea.” ❖

Reference

Memtsoudis S G, Stundner O, Rasul R, et al. The impact of sleep apnea on postoperative utilization of resources and adverse outcomes. *Anesth Analg*. 2014;118(2):407-418. Accompanying editorial, 251-253.

Advisory Board

Mark E. Bruley, EIT, CCE

Vice president of accident & forensic investigation, ECRI, Plymouth Meeting, Pennsylvania

Lori A. Coates, BSN, RN, CNOR

Perioperative RN, Orthopaedics/General Surgery/Spine/GYN, Treasure Valley Hospital, Boise, Idaho

Brian Dolan, MHSA, RHIA, CHDA, SSGB

Director, business operations, surgical services, University of Kansas Hospital, Kansas City, Kansas

Linda R. Greene, MPS, RN, CIC

Infection preventionist, Rochester, New York

Jerry W. Henderson, MBA, RN, CNOR, CASC

Assistant vice president, perioperative services, Sinai Hospital, Baltimore, Maryland

Jodi Koch, RN, CPAN

Director, perioperative services, Lehigh Valley Health Network, Allentown, Pennsylvania

Deborah Rideout, BSN, RN, CNOR

Director, perioperative services, South-coast Hospitals Group, New Bedford, Massachusetts

John Rosing, MHA, FACHE

Vice president and principal, Patton Healthcare Consulting, Milwaukee, Wisconsin

Nancy Schlossberg, BSN, RN, CGRN

Nurse manager, Bon Secours Health Center at Harbour View Endoscopy Center, Suffolk, Virginia

Patricia C. Seifert, MSN, RN, CNOR,

CRNFA, FAAN
RN First assistant/educator, Inova Heart and Vascular Institute, Falls Church, Virginia

Diane Skorupski, MS, RN, CNOR, NE-BC

Associate vice president, perioperative services, UF Health Shands, Gainesville, Florida

Patricia Vassell, MBA, RN, CNOR, CCRN

Nurse executive consultant, Miramar, Florida

David E. Young, MD

Medical director, perioperative services, Advocate Lutheran General Hospital, Park Ridge, Illinois

Rounding Tool

Continued from page 1

pon Research Institute, where 9 orthopedic fellows a year develop their surgical skills.

Though perioperative services just began using the VVMC-specific MyRounding in November 2013, the hospital has been working with Safer Healthcare (<http://www.saferhealthcare.com/>) since the beginning of 2012 as a test site for developing the tool for use in their high reliability training.

Safer Healthcare (Littleton, Colorado) is a training, consulting, and healthcare products firm that focuses on establishing a patient safety culture through creating high reliability healthcare organizations. "Rounding to influence" is 1 element of an evidence-based bundle of leadership methods used in highly reliable organizations.

Structured and consistent rounding also has been found to increase patient satisfaction and improve HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) scores. MyRounding uses HCAHPS best practices and patient-centered scripts.

Everyone on the VVMC perioperative leadership team has their own iPad with the MyRounding software, including Steiert, the perioperative educator, perioperative nurse liaisons, specialty team leaders, and charge nurses in the OR, preoperative area, and postanesthesia care unit.

Leadership rounding questions

For her leadership rounding, Steiert has a set of questions in the iPad for the surgeons and a set for the staff, with icons for each (sidebar above).



Source: MyRounding Solutions, Littleton, Colorado.

"We created a series of questions for surgeons and staff, asking them about their perceptions of what we can do to improve their work environment and the quality of patient care," says Steiert. "I touch the staff icon and the questions appear." (See sidebar, p 8.)

Questions for staff

- On a scale of 1 to 5 overall [1 is low, 5 is high], how are things working in this department?
- Is there anything you can think of specifically that is working well in this unit or department?
- Is there anything you can think of that is not working well in this unit or department?

"I can record their voices when they give me their answers, or I can put the data into the iPad as we are talking," says Steiert. "I also can take photographs, so if I am on a unit and I see something that my staff doesn't like, I can take a picture of it, and that can be stored data as my justification for my rationale to make a change." (See sidebar, p 9.)

Questions for surgeons

For the surgeons' questions, Steiert touches the surgeon icon and a script and questions appear, and then she records the surgeons' answers.

The script begins with: "Dr X, would you mind spending a moment with me to talk about patient safety and quality improvement in the OR? We are trying to be proactive and address any concerns and capture any ideas that you may have that can help us improve our patient care."

- On a scale of 1 to 5, how would you rate the quality of nursing in the OR?
- Are there any concerns or ideas that you would like to share about patient safety here in our OR? Yes or No.
- Are there any quality improvement projects that you think would be beneficial to our department? Yes or No.
- On a scale of 1 to 5, how satisfied are you overall here in our

Continued on page 8

TRU-D KEEPS DISINFECTION ON TRACK

TRU-D SmartUVC's new cloud-based usage tracking technology, iTRU-D, uploads data in real time, allowing hospital staff to access customized reports around the clock.

- ✓ TRACK INFECTION CONTROL DATA
- ✓ TRACK USAGE EFFICIENCY
- ✓ TRACK RISK AVERSION

TRU-D is the only automated, no-touch, UV disinfection system that is clinically validated



See the TRU-Difference at tru-d.com

800-774-5799

Disinfection Down to a Science

TRU-D
SMARTUVC™ ROOM DISINFECTION
© 2014 SMARTUVC™

Continued from page 6

department?

- Is there anything I can do personally to help you make your practice in our OR more effective? Yes or No.
- Is there anyone who you would like to recognize for going above and beyond the norm?

At the end of the interview, Steiert presses a button to save and start a new interview.

“It works quickly,” says Steiert. “About 5 minutes of their time is all I need.”

Nurse liaison rounding questions

After a nursing liaison position was added in November 2013, a series of questions were created for the nurse liaisons to ask patients and their families. Two nurses share the position.

Questions for patients

- Do you understand your plan of care and what to expect from admission to discharge? Yes or No.
- Is there any additional information that you would like, or do you have any questions? Yes or No.
- Do you feel that all members of your care team understand and agree on your plan of care? Yes or No.
- Do you feel like you had a voice in your plan of care with all members of your care team? Yes or No.
- Do you feel like we have kept your family members up to date and informed about the progress in your procedure today? Yes or No.
- Is there anything we could have done better to help you or your family? Yes or No.
- Do you have any last questions or concerns?

Source: MyRounding Solutions, Littleton, Colorado.

Questions for the family

Questions the nurse liaison asks family members begins with a script: “I just want to check in with you to see how you are doing and give you an update.”

The nurse then tells them about the current status of the patient and asks the following questions:

- Is there anything I can do to make you more comfortable while you are waiting? Yes or No.
- Is there any additional information you need, or are there any questions I can answer for you? Yes or No.
- Are you able to follow the progress of your family member using our patient board? Yes or No.
- Would you like me to continue to check in with you to monitor the situation? Yes or No.

“I like the last question, especially,” notes Steiert. “Knowing the nurse will be there if they have questions is comforting to them.”

Trending the issues

With the stored information, the MyRounding software identifies trends and issues and compiles statistics on the data.

“The tool helps us close the loop on issues because it trends the issues, which helps us resolve them,” says Steiert.

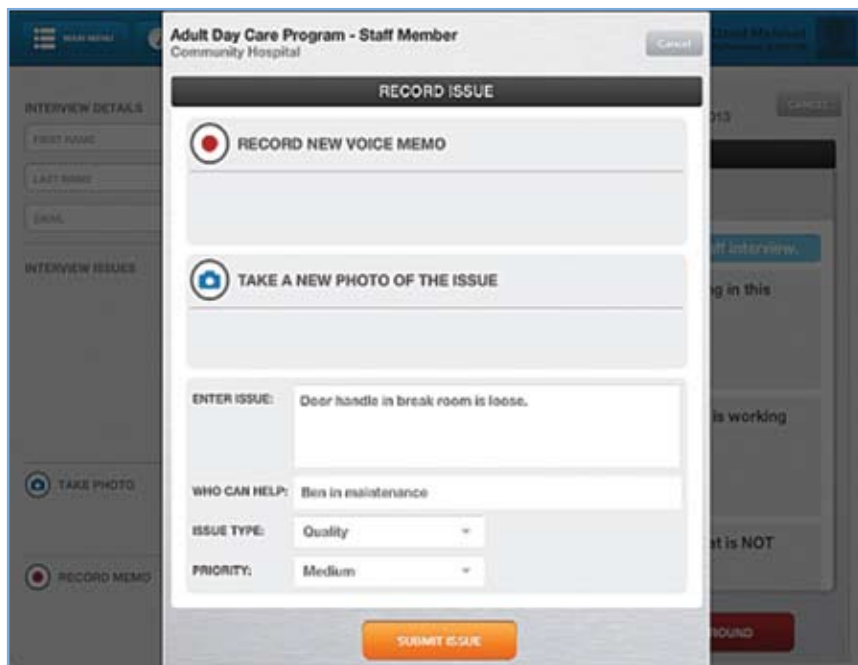
For example, 1 of the top trends identified was that staff and surgeons were focused on getting first-case patients into the OR on time. A corresponding trend was that patients were delayed going into the OR because their H&Ps weren’t on the chart.

An A3 Lean methodology was used to determine why the H&Ps weren’t on the chart and what needed to be done to have them on the chart in a more timely fashion.

“We worked with the surgeons’ offices, PAs, fellows, and IT to discover the obstacles and how to overcome them,” notes Steiert.

As a result, Steiert says, they figured out the latest possible time to stop looking for an H&P,

Patient safety



Source: MyRounding Solutions, Littleton, Colorado.

call the surgeon, and get the patient into the room on time. “One thing nurses don’t like to do is call the surgeon, especially for the first case of the day, saying ‘we can’t find your H&P,’” she says.

Steiert says they worked backward to accomplish this, asking: “If we want the patient in the room by 7:29 am, what needs to happen before that time?”

It helped create a whole process for standardizing work, she says. For example, they are trying to standardize all the work the night nurses need to do to have things ready for the day shift for the first case of the day and what the evening shift needs to do to help the night shift. “It has sparked more work than we have time to do, but it is fun and people are getting energized,” says Steiert.

Another example: A hand surgeon from the Steadman Clinic was doing a case during the Thanksgiving holiday when the ski slopes opened, and many people were coming in with injuries.

There was a particular elevator missing from 1 of his hand sets.

When Steiert did her rounding the following Monday, she asked him how things went over the weekend because she knew he had been on call. When she asked him if he was satisfied with the care his patients received or if there was something they could have done to make it better, he answered: “Yes, we could only find 1 Kleinert-Kuts elevator for this special procedure.” He said the procedure was designed by these 2 surgeons and it goes better when their elevators are used.

Steiert went to the surgical processing department and asked how many Kleinert-Kuts elevators they had and if they were included in the hand sets or if they were put up separately in peel packs.

She found they were down to 1 elevator, and it was in a peel pack. She ordered 5 additional elevators so 1 could be in every hand set.

She followed up with the hand surgeon the next day, telling

him she had ordered 5 more that would be in all of the hand sets the following week.

Effectiveness of tool

Steiert says in the next 3 months they should have a lot more data and will be able compare surgeon, staff, and patient satisfaction before and after they began rounding with the tool.

Perioperative leadership surveyed staff and surgeons before they started rounding about their level of satisfaction with the way things were going in the department. In a few months, they will do a post-survey to see if there is a difference.

Already, Steiert says, comments from surgeons, the executive team, and staff indicate they have noticed an improvement in patient care and customer service. Instrumentation and equipment is ready sooner, and patient satisfaction scores have improved across the organization. ❖

—Judith M. Mathias, MA, RN

Resources

Centers for Medicare & Medicaid Services. HCAHPS: Patients’ perspectives of care survey.

<http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/HospitalHCAHPS.html>

Institute for Healthcare Improvement. Rounding to influence: Leadership method helps executives answer the “hows” in patient safety initiatives. 2011.

<http://www.ihl.org/knowledge/Pages/Publications/Rounding-toInfluence.aspx>

Marshall D. Leadership rounding on the front lines. Safer Healthcare. 2013.

http://myrounding.com/images/files/Best_Practice_-_Leadership_Rounding_-_2-19-2013.pdf

Handoffs

Continued from page 1

Improving Transitions of Care: Handoff Communications. The tool is based on the acronym SHARE: Standardize critical content, Hardwire within your system, Allow opportunity to ask questions, Reinforce quality and measurement, and Educate and coach.

Many hospitals are using these principles when they address how to conduct a handoff, which seems to be a simple task. But like a young person in whom a surgeon unexpectedly finds cancer, appearances can be deceiving. Handoffs aren't simple. An effective handoff requires commitment, coordination, and yes, a bit of passion.

The value of handoffs

OR leaders, clinicians, and other administrators intuitively know that accurate handoffs help prevent errors that can harm patients. But handoffs can also improve outcomes. A study of 1,507 neonates, infants, children, and adults published in the *Joint Commission Journal on Quality and Patient Safety* found that using a structured handoff when transferring patients from the cardiovascular OR to the cardiac ICU significantly reduced the number of unplanned extubations and the amount of time patients were on the ventilator.

"The handoff protocol definitely contributed to those results," says Mark Twite, MD, BCh, MB, an anesthesiologist at The Heart Institute of Children's Hospital Colorado in Aurora and 1 of the study's authors. Having an awareness and a structure to the handoff "shows we think it's a really important part of patient care," he says. For example, when the anesthesiologist tells the nurse and the respiratory therapist

where the endotracheal tube is taped, both clinicians will know to speak up if they note even a small difference in placement.

Dr Twite attributes the reduction in ventilator time to setting expectations. "That helps the ICU team decide on who to fast-track for extubation, and the anesthesiologist, surgeon, and nurse are all on board with the plan. Everyone is hearing the same message."

Assemble the right team

Like professional coaches, OR leaders must strive to build the best team possible to attain success. "It's hard to get everyone to come to the table," Olieman acknowledges.

At Health Central Hospital, a community hospital that has 8 ORs and performs nearly 5,000 procedures a year, she and Robinson surmounted that challenge by drafting champions from each area affected by handoffs to be on the team. The chief of anesthesia and a certified registered nurse assistant known for his strong patient advocacy, along with representatives from the PACU and the OR, comprised the team. These leaders were able to help "bring reluctant ones into the fold," says Olieman. The interdisciplinary team also managed to break down silos, getting staff from various departments to talk more about issues beyond handoffs.

Ina Cherepaha-Kantorovich, MN, RN (EC), advanced practice clinical educator for the preadmission, PACU, endoscopy, and cystoscopy units at Toronto General Hospital in Ontario, Canada, suggests asking for volunteers to fill staff spots on the team. The working group for handoffs facilitated by Cherepaha-Kantorovich and Maria Masella, MN, RN, educator in the OR, included 4 staff nurses from the OR and 4 from PACU.

"You also have to have orga-

nized meetings and follow-up during implementation so the process doesn't fall apart," she adds. "Include staff all the way." Cherepaha-Kantorovich and Amanda Zakrzewski, a PACU staff nurse, spearheaded the process.

Think outside the box; a non-clinical person can be a great facilitator, says Mary Grzybinski, BSN, RN, administrative clinical advisor for PACU at Beth Israel Deaconess Medical Center (BIDMC) in Boston. A staff member from the business transformational office who is embedded in the perioperative area helped the 10-member multidisciplinary BIDMC team establish an effective handoff procedure.

"We are focused on clinical, so we don't always see how to attack a problem from a bigger picture," Grzybinski says. The business staff member "helped us see the business end and keep us focused."

Analyze the process

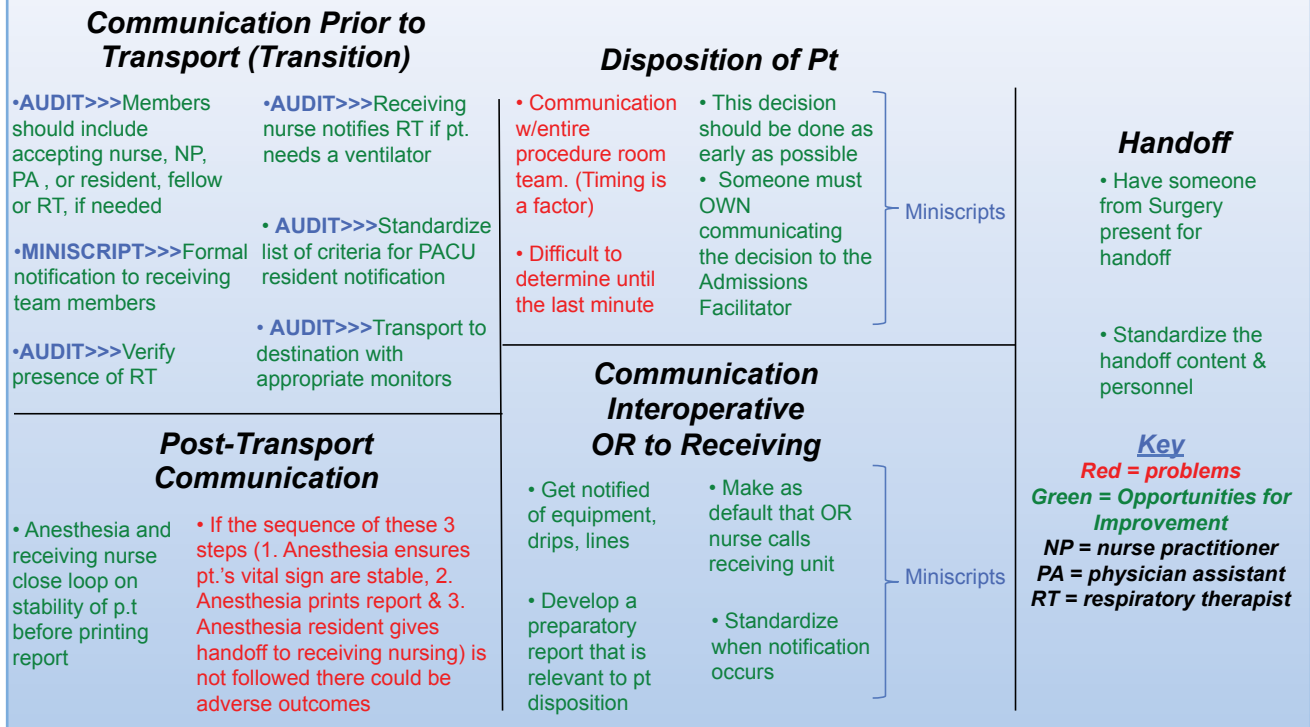
Many OR leaders use Lean tools to analyze the handoff process. A value stream analysis showed the team at Health Central Hospital deficiencies in the current process, Robinson says. The team at BIDMC also performed a value stream analysis and identified several categories of changes that could be made.

"The value stream map helped us know how everyone perceived handoffs so we were on the same page," Grzybinski says. Team members learned what others needed from them.

"PACU nurses sometimes only got part of a patient's information because the provider didn't realize that the whole picture made a difference in the case," she says. "Then we did an impact difficulty analysis grid that helped us analyze the difficulty of fixing each problem and the impact fixing

Care coordination

Handoffs Team Affinity Diagram



The affinity diagram shows communication problems and opportunities in each of 4 key handoff areas. Clinicians can use miniscripts to ensure they provide needed information.

Source: Beth Israel Deaconess Medical Center, Boston. Used with permission.

that problem would have on improvement in handoffs. Communication had the highest difficulty and the highest impact, so we decided to tackle that.”

The team created an affinity diagram that examined 4 areas: communication before transport, post-transport communication, disposition of the patient, and communication interoperatively to the unit that will receive the patient after surgery (sidebar above). Strategies were identified to address each area.

Robinson says a factor that’s easily missed in an analysis is whether people are focused on the handoff or on the task. When observing handoffs from the OR to the PACU, she was struck by the fact that participants were doing many tasks while trying to receive important patient information.

“When you are performing

tasks and receiving information simultaneously, you don’t retain what you are being told,” she says. That led to the creation of a “no fly” zone—report is not given until basic tasks, such as connecting the patient to the monitor and oxygen, are completed, so the PACU nurse can give the other clinicians his or her full attention.

Another vital part of the analysis is examining attitudes. “The biggest challenge for making the change wasn’t the surgeons, it was the OR nurses,” Cherepaha-Kantorovich says.

In fact, OR nurses didn’t like the initial tool, saying it didn’t reflect what they did. A survey revealed OR nurses felt “devalued” because the PACU staff weren’t paying attention to what the OR nurses were saying. The PACU nurses revamped their approach, and the process was revised so

that it better reflected contributions from the OR nurses.

Put the process in place

Protocols, especially those incorporating checklists, are a frequent—and effective—solution to handoff challenges. For instance, a 2013 study in Pediatric Anesthesia found that a checklist dramatically improved the quality and reliability of the handoff.

Olieman recommends allowing protocols to develop organically. “We kept the flow of information during the handoff loose at first so that it could be developed, and then we standardized so it included what each person needed to know,” Olieman says.

Ultimately, the team developed a paper tool (sidebar, p 12). Olieman says the paper format is

Continued on page 12

Care coordination

Continued from page 11

key to the tool's success: "When a nurse gets a patient, she needs to know information really fast without flipping through a dozen computer screens." The tool, which isn't part of the permanent patient record, provides that.

"Although some people might think it's double documenting (because some of the information on the tool has to be entered into the computer), it's not," Olie-man notes. "It's not hard and it's not complicated. It's like a work-sheet."

The tool has expanded so that it starts in the preoperative area and travels with the patient through the OR, the PACU, and onto the nursing unit.

"It's color coded, so each unit has ownership for their section," says Robinson, who adds, "It's not just a piece of paper; it's a process by how we can make the patient's trajectory through the system safe and meet regulatory agency requirements."

BIDMC's guidelines "spell out what happens from step to step, whether the patient is going to the PACU or the ICU," says Grzybinski, adding that scripts help everyone remember what needs to be included (sidebar, p 13). "Otherwise, people tend to tell what they think is important, which might not be what's important to the other person," she says, citing situations in which the anesthesiologist fails to mention the patient doesn't speak English or can't hear at all without his hearing aids.

"We try to broaden the horizons of all providers," Grzybinski says. "It's not just what one provider needs; it's what we all need to take excellent care of the patient." Laminated cards of the scripts are available.

The structured handoff used at Children's Hospital Colorado out-

Handoff Communication Guidelines PERIOPERATIVE PEARLS

P	Patient name: _____
	Age: _____ Allergies: _____
	Procedure performed _____
	Primary language spoken: <input type="checkbox"/> English <input type="checkbox"/> other: _____
	Past medical history: <input type="checkbox"/> Diabetes <input type="checkbox"/> HTN <input type="checkbox"/> COPD <input type="checkbox"/> Asthma <input type="checkbox"/> OSA <input type="checkbox"/> Renal Disease <input type="checkbox"/> Seizures <input type="checkbox"/> Cardiac <input type="checkbox"/> CAD <input type="checkbox"/> PVD <input type="checkbox"/> CVA <input type="checkbox"/> Liver Disease <input type="checkbox"/> ETOH <input type="checkbox"/> Smoking (ppd _____) <input type="checkbox"/> Arthritis <input type="checkbox"/> MRSA <input type="checkbox"/> VRE <input type="checkbox"/> TB <input type="checkbox"/> C Diff <input type="checkbox"/> Deaf <input type="checkbox"/> HOH <input type="checkbox"/> Blind
E	Position during surgery: <input type="checkbox"/> supine <input type="checkbox"/> prone <input type="checkbox"/> lithotomy (type of stirrups: <input type="checkbox"/> candy cane <input type="checkbox"/> allen) <input type="checkbox"/> jack knife <input type="checkbox"/> Other _____
	Precautions: <input type="checkbox"/> falls <input type="checkbox"/> Seizure <input type="checkbox"/> Aspiration <input type="checkbox"/> Decubitus <input type="checkbox"/> Isolation: <input type="checkbox"/> Contact <input type="checkbox"/> Droplet
	Personal Items: <input type="checkbox"/> Dentures <input type="checkbox"/> Glasses <input type="checkbox"/> Hearing Aids <input type="checkbox"/> Prosthesis : (_____)
A	Pain management: <input type="checkbox"/> PCA pump <input type="checkbox"/> Epidural <input type="checkbox"/> On-Q pump <input type="checkbox"/> Other: _____
	Extremities: <input type="checkbox"/> Ted hose <input type="checkbox"/> SCD's <input type="checkbox"/> Pulses
	Adverse events intraoperative: _____
	Equipment needs: <input type="checkbox"/> CPM <input type="checkbox"/> Ventilator <input type="checkbox"/> Wound Vac <input type="checkbox"/> NGT <input type="checkbox"/> Cell saver
R	Elimination: <input type="checkbox"/> Foley <input type="checkbox"/> Suprapubic tube <input type="checkbox"/> I&O <input type="checkbox"/> Straight cath
	Assessment: <input type="checkbox"/> Skin <input type="checkbox"/> Incision <input type="checkbox"/> Packing <input type="checkbox"/> Musculoskeletal <input type="checkbox"/> Neuro
	Drains: <input type="checkbox"/> JP <input type="checkbox"/> Hemovac: location _____ <input type="checkbox"/> Penrose <input type="checkbox"/> Blake tube
	Chest tubes: <input type="checkbox"/> Rt <input type="checkbox"/> Lt <input type="checkbox"/> Urology stents: <input type="checkbox"/> Rt <input type="checkbox"/> Lt <input type="checkbox"/> G tube
	Dressings: Location _____ Number _____ Drainage: <input type="checkbox"/> Yes: Type _____ <input type="checkbox"/> No
L	Antibiotic: <input type="checkbox"/> Yes: Time last dose _____ <input type="checkbox"/> No
	Vital Signs: Temp: _____ HR _____ BP _____ RR _____
	Relationships: Family location: _____ Contact phone #: _____
S	Radiology: <input type="checkbox"/> CXR <input type="checkbox"/> Other _____
	Labs due: <input type="checkbox"/> H&H <input type="checkbox"/> BMP <input type="checkbox"/> CBC <input type="checkbox"/> PT/PTT <input type="checkbox"/> T&C <input type="checkbox"/> Accucheck <input type="checkbox"/> Blood sugar
	Lines: <input type="checkbox"/> Central <input type="checkbox"/> Arterial <input type="checkbox"/> Peripheral: location: _____ <input type="checkbox"/> Swan-Ganz <input type="checkbox"/> CVP <input type="checkbox"/> PICC line <input type="checkbox"/> Port: location: _____
	Blood products: _____
S	Special devices: <input type="checkbox"/> Pacemaker <input type="checkbox"/> AICD <input type="checkbox"/> Insulin pump <input type="checkbox"/> Other _____
	Special needs: <input type="checkbox"/> DVT protocol <input type="checkbox"/> Specialty bed: _____
	Spiritual needs: _____
	Special communication needs: <input type="checkbox"/> Sign language interpreter <input type="checkbox"/> Interpreter
Surgical Unit: <input type="checkbox"/> SCU <input type="checkbox"/> OSU <input type="checkbox"/> CVICU <input type="checkbox"/> PCU <input type="checkbox"/> IMCU <input type="checkbox"/> MSU <input type="checkbox"/> TMU	

This worksheet, which facilitates handoffs, is not part of the medical record.

Source: Health Central Hospital, Ocoee, Florida. Used with permission.

lines the order of report. After the patient is on the ICU monitor and the vital signs have been checked, the OR nurse and ICU nurse both verify the patient's identification. The cardiac surgeon or fellow gives report, followed by the anesthesiologist or anesthesia fellow and the OR nurse.

Dr Twite says the team in the cardiovascular ICU then does a "wrap up, going through the plan for the patient—hemodynamic goals, where we are going with extubation, the plan for sedation—and at the end they cover any questions or concerns. Then

the ICU assumes official care of the patient."

Whatever the process, Cherepaha-Kantorovich emphasizes that consistency is vital even if that means standing firm. "If a surgeon or OR nurse didn't come, the PACU nurse didn't accept the patient," she says. "You need the consistency so that people understand it is serious; it's important for the patient's safety." She and the OR nurse educator made sure they were available to staff to facilitate implementation, and now the process is standard practice.

Care coordination

Sample narrative script

This is an example of the narrative scripts used at Beth Israel Deaconess Medical Center, Boston, to remind providers what information to provide. Among the other scripts are 1 for the anesthesia provider to the RN circulator and 1 for the anesthesia provider to the RN receiving the patient after surgery.

Narrative script: RN circulator to receiving unit

Sender (RN Circulator) Hi, We are finished in room ____, Dr _____ patient _____, who had a _____ procedure. He/she will need the following:

- Ventilator or specific respiratory set up (eg, t-piece)
- Drips and patients weight
- Invasive monitoring set up
- Precaution status
- Epidural

Receiver (Receiving RN) Thank you OR I need clarification of the following...

Sender (RN Circulator) Can we have a slot/room?

Receiver (Receiving RN) Thanks for the information. You can go into slot/room _____ OR we will call you back with a slot/room.

Source: Beth Israel Deaconess Medical Center, Boston. Used with permission.

The time factor

Rapid throughput is essential for a successful OR, so staff and leaders worry about the time spent on handoffs. Fortunately, this fear is often unfounded. "There was some reluctance [among] OR nurses to participate," says Robinson. "They were eager to get back to the OR to start the next case." By eliminating the inefficiencies discovered through the value stream analysis, however, nurses easily found the time they needed.

"Taking time up front can save time later on," Cherepaha-Kantorovich adds. The handoff takes about 5 minutes and replaces the multiple calls PACU staff used to have to make to the OR to obtain missing information.

And, of course, time isn't standing still in the OR while the nurse is in the PACU or ICU. "While we are doing the handoff, our team is doing the room turnover," says Dr Twite. He says the entire team agrees that any delay "is a small price to pay for accu-

rate handover of patient information. An accurate handover is part of excellent patient care and excellent outcomes."

Follow up

To ensure the handoff process meets the team's needs, it's helpful to survey clinicians at key intervals. Robinson used a Likert scale to assess satisfaction among OR and PACU nurses before and after implementation. After implementation, satisfaction increased in both areas, with a particularly dramatic increase among OR nurses. "[The handoff process] helped them put aside the task part of the job and remind them why they became perioperative nurses," Olieman says in accounting for the increase.

Cherepaha-Kantorovich surveyed staff before and after implementation and 1 year later. "The final evaluation was very positive," she says, adding that the new process has now been in place for 18 months. Most sur-

geons and PACU, OR, and anesthesia staff believed the handoff tool had improved communication and helped to convey accurate patient information to the PACU staff.

A commitment to patient safety

"Anytime there is a change, it's hard," Robinson says. "But this [handoff tool] has become hardwired into the process." Olieman says the tool is part of orientation and that the perioperative nursing council has taken ownership of it. Perhaps the most exciting payoff for the team at Health Central Hospital was that in 2012 they received an award from the Florida Hospital Association.

So what advice does Olieman have for other OR nurse leaders planning to work on handoffs? "Don't be afraid to take on the big, scary project. It was overwhelming, but we did it." ❖

—Cynthia Saver, MS, RN

Cynthia Saver, a freelance writer, is president, CLS Development, Inc, Columbia, Maryland.

References

- Boat A C, Spaeth J P. Handoff checklists improve the reliability of patient handoffs in the operating room and postanesthesia care unit. *Pediatr Anesth.* 2013;23(7):647-654.
- Kaufmann J, Twite M, Barrett C, et al. A handoff protocol from the cardiovascular operating room to cardiac ICU is associated with improvements in care beyond the immediate postoperative period. *Jt Comm J Qual Patient Saf.* 2013;39(7):306-311.
- The Joint Commission Center for Transforming Healthcare. Improving transitions of care: Hand-off communications. May 13, 2013. http://www.centerfortransforminghealthcare.org/assets/4/6/CTH_Hand-off_commun_set_final_2010.pdf

Tracking tool streamlines scheduling, enhances communication with surgeons' offices

Sacred Heart Medical Center RiverBend in Springfield, Oregon, began OR optimization efforts soon after moving to a new facility in August 2008. Because of the US economic downturn around that same time, the hospital launched several initiatives to make the most of available resources, including a Lean process to improve turnover times.

But an underlying problem was holding back progress on turnover time and other improvement fronts: Scheduling between surgeons' offices and the OR staff wasn't standardized, often leading to missing information, errors, and delays.

"The schedule is your roadmap for the day. We did other initiatives, but because we recognized the importance of an accurate schedule, we were always prepping in the background, looking at options to address scheduling," says Barbara A. Faust, MN, RN, CNOR, director of quality, safety, and standards for surgical services. Sacred Heart is part of the PeaceHealth system, which operates 9 hospitals in Alaska, Washington, and Oregon and has a strong commitment to patient quality and safety.

Surgeons' offices were scheduling via phone or fax, using a variety of different forms. Problems with this process included incorrect transcription of patients' names and procedures because of not hearing correctly or difficulty in reading handwriting, missing information because of lack of a standardized form, and missing documentation, such as orders, for the day of surgery because of unreliable fax transmission. Cases were sometimes delayed while nurses hunted for information.

Use of this tool eliminates any finger-pointing.

"There was a lot of finger-pointing. It was difficult to track the source of problems because there was no trail," Faust says.

With the go-ahead from the executive leadership but with a limited budget, work on the tool began in November 2011.

A full-time job

Sacred Heart has 25 ORs and 4 procedure rooms where 18,000 procedures per year are performed. Early on, it became clear that overhauling the scheduling system would require a full-time staff person's efforts. Because resources wouldn't allow for a dedicated IT team, this individual had to be multitasking, Faust says.

"This person needed to be computer-savvy and work well with people. We were going to be asking the offices to do their work differently, so we had to sell this project. This individual had to have the time to make improvements and do the communication."

As it turned out, that person was already on staff. Julie Womack had been a staffing coordinator for surgical services, with a track record of facilitating scheduling there. As the newly appointed surgical data and business analyst, Womack began investigating software options for

electronic transmission of information between the offices and the OR.

Tweaking the system

Womack aimed to find a system that would allow access by multiple users in both the office and the OR at the same time. A couple of ideas didn't pan out. Importing the OR's own scheduling software, PICIS, into the surgeons' offices turned out to be technically unfeasible. A secure email system was considered, but what they really needed was a system similar to Microsoft's Sharepoint that would allow multiple users access to the same database.

Because of the tight budget and lack of a dedicated IT project team, Womack turned to a home-grown software tool already in use as an "issue tracker" that allowed multiple users access to address particular problems.

"We researched what we could do with our capabilities and virtually no money," Faust notes.

The issue tracker was renamed "Data Exchange Scheduling Tool," and a PeaceHealth business analyst showed Womack the different features of the application. Then she began configuring it to address the unique requirements of scheduling. Within the tool, she designed electronic forms for each surgical specialty. All the forms contain the same required fields, including the patient's name, birthdate, preoperative diagnosis, name of procedure, CPT and ICD-9 codes, primary language, and phone number, all in the same order.

Under the previous system, faxes arrived with the information listed in random order. Having the information listed uni-

Performance improvement

formly makes it much easier for the OR schedulers to type or copy and paste it into PICIS. "The form flows exactly the same way every time," Womack notes. (Unfortunately, they weren't able to get the tool to automatically populate into PICIS and data must be entered manually, but at least now all the information is being received electronically and in a standardized way.)

Next, Womack created customized drop-down lists of instrumentation for each surgical specialty, with each list containing all the equipment available on-site. If a procedure requires special instrumentation, that order is typed into a separate box.

In order to comply with HIPAA (Health Insurance Portability and Accountability Act) regulations, a part of the tool called an "issue set" allows it to be sliced so that the OR schedulers can see the incoming forms from all surgeons' offices, but each office only sees the forms for their own patients.

Another feature, called a "diary note," allows the office schedulers to send a message signaling any special requests or changes, such as the date of surgery. The OR schedulers then respond and confirm the request or change.

Documents such as consent forms and order sets are attached to the tool either directly from the office's electronic health record or by scanning the paper forms.

Womack set up checklists of all the necessary forms so that OR schedulers can easily see which documents are attached and which are missing. That way, they have time to locate missing forms prior to the day of surgery.

"If you can't see the orders, H&P, and consent in the data exchange, we don't have them. They're not sitting on a fax machine," Faust notes.

A key feature, Faust points out,

is that the tool eliminates finger-pointing. "Everyone who touches the data leaves a time trail. If a case is scheduled incorrectly, we can go back and see which side the error came from."

Taking it to the offices

Once the pilot tool was developed, secure connectivity had to be established to exchange information between the OR and surgeons' offices. The practices affiliated with PeaceHealth were already connected to the secure server, but the outside offices needed to be brought in. Forms had to be filled out to obtain the appropriate licenses, for which there was a small fee.

Faust and Womack began rolling out the tool in February 2012, beginning with a PeaceHealth-affiliated bariatric surgery practice, followed shortly by an orthopedic surgeon's office that was also part of the PeaceHealth system.

After visiting each office and giving an initial presentation on the tool, Womack trained the scheduling staff of each office one by one, making sure the software was properly set up and taking the schedulers through practice cases. "I would stay there as long as they needed me, and I'd come back as many times as they needed. We really wanted this system to work, and we really wanted to partner with them," Womack explains. "The tool turned out to be very intuitive and easy to use, and many offices did not need extra assistance," Faust adds.

Once the offices were fully functioning with the new scheduling tool, Faust and Womack invited office schedulers and office managers into the OR to see the patient pathway on the day of surgery. They met their scheduling counterparts on the OR side as well as the charge nurses for the

specialty of each of their practices. Included in this tour was a stop in sterile processing, along with the implant and loaner room. "This really opened their eyes to the reason we need specific information in a timely manner in order to prepare for the patient and surgeon," says Womack.

"We gave the schedulers a chance to meet our schedulers, and then the office managers could meet the surgery directors and really build those relationships," Faust says.

Evolving every day

Since bringing the last of the practices on board in November 2012, Faust and Womack have received very positive feedback on the tool from users on both ends, as well as suggestions for further tweaks. "We interview all the office staff during the tour. It was surprising to us that even the most reluctant adopters were very positive about the new tool; they said, 'this is one of the best things that has been done to improve communication between the office and surgery.'"

PeaceHealth facilities in Oregon, Alaska, and Washington are in various stages of developing a similar system.

Other parts of the hospital have also begun using the tool. The financial services department now obtains CPT and ICD-9 codes from it, whereas before they often struggled to get that information from the offices. This has helped reduce the number of cancellations of surgery caused by lack of preauthorization and has improved communication between patient financial services and surgeons' offices, Womack says.

Internally, the utilization review team is also using the tool to make sure offices are entering

Continued on page 16

Performance improvement

Continued from page 15

the correct admission status for patients in order to be reimbursed for the surgery.

"We didn't know we'd be using it beyond scheduling, but then realized it could do so much more," Womack explains. Faust adds, "The tool is honestly evolving every day. It has taken on a life of its own."

Faust advises other OR teams interested in developing such a tool to research what they have on-site because many hospitals already have an issue tracking system or other platform that can be similarly reconfigured. "You may have something within your system that you can use at a lower cost, instead of looking outside," she notes.

Faust and Womack are working to collect data on how well the system has performed in stream-

lining their OR practice. They will present "Improving Patient Safety and OR Efficiency Through Scheduling and Communication" during the 27th OR Manager An-

nual Conference, September 17-19, in Long Beach, California. ❖

Miriam E. Tucker is a medical journalist in Bethesda, Maryland.

BURNING QUESTIONS

Have you read anything lately in OR Manager that made you hungry for more information? Is there a topic you wish we would cover? If so, we'd like to hear from you!

Recent inquiries

- Who serves as first assistants when residents or physician assistants aren't available?
- How do you fill this gap without adding significant costs or new positions?
- How is medical marijuana affecting the anesthesia or surgical procedure preoperative assessment?
- Can a patient who is using medical marijuana sign the consent form from a legal perspective?

If you have an opinion or a burning question of your own, please send an e-mail to **Elizabeth Wood**, ewood@accessintel.com, and we'll share your thoughts in our next issue.



IT'S PERSONAL.

No two people are the same. Treating every patient with precise, personalized care is the inspiration behind our market-leading Tourmiquet System design. That's why the Zimmer Tourmiquet Systems don't just stop blood flow. Our tourniquet systems can deliver Personalized Pressure – the minimum amount of tourniquet pressure for each individual patient.

Introducing the All-New A.T.S.® 4000 Tourniquet

For more information about the new Zimmer Tourniquet Systems – featuring Personalized Pressure™ Technology – contact your Zimmer representative or learn more at personalpressure-zimmer.com.


zimmer
tourniquet systems

© 2014 Zimmer Surgical, Inc.

Improving instrument readiness cuts case delays, boosts surgeon satisfaction

Surgical case delays have been found to last an average of nearly 17 minutes. Not only do such delays make surgeons dissatisfied, they also reduce case volume and related revenues, and they may lead to additional time under anesthesia for patients.

The root causes of instrument-based delays are seldom simple, and long-lasting culture-based solutions prove elusive in many facilities.

Managers in the OR and sterile processing department (SPD) at Wesley Medical Center in Wichita, Kansas, had tried unsuccessfully over the years to address recurrent instrument issues. In 2011, following management consultant Peter Drucker's mantra that "what gets measured gets managed," we outsourced our sterile processing to improve instrument readiness and to measure and benchmark performance.

As a result, we significantly improved key performance indicators (KPIs) in this area within 180 days, and over 3 years, we reduced dirty instruments by 94%, tray errors by 86%, immediate-use sterilization by 77%, and unprocessed trays by an average of 94%.

Process improvements

A key resource for our process improvements was access to a national database of KPIs related to instruments, sterile processing, and OR throughput, maintained by our SPD outsource vendor, Integrated Medical Systems International, Inc. (IMS). (KPIs are performance measurements designed to evaluate an organization's success in achieving and maintaining operational standards or meeting strategic objectives.)

The first step was to educate

OR and SPD teams share goals and feedback.

OR and SPD staff about the interdependent relationship between their departments. The KPIs would improve only if the 2 teams worked together to resolve issues. Instead of casting blame, OR and SPD staff had to understand how their actions contributed to or detracted from overall performance.

A survey of our surgeons enabled us to identify surgeon hot points to address aggressively within the first 180 days. Surgeons were asked to rank these and other questions on a 5-point Likert scale that ranged from "very dissatisfied" to "very satisfied":

- Are cases delayed due to instrumentation?
- Do surgical instruments function correctly?
- Is sterile processing responsive to your needs?

Based on the evaluation of on-site assessments, the following KPIs were targeted for improvement:

- Dirty instruments
- Unprocessed trays
- Tray errors
- Immediate-use sterilization loads
- Post-case audits
- OR frictions.

A 5 × 4 foot dry erase board was installed in the SPD to track performance. A white board may sound like a small thing, but it is

essential for keeping staff focused on ongoing goals. In addition, the white board created a level of conscientiousness around these KPIs that began to seep into the culture of our surgical unit. SPD tracked activity in real time, noted trends and discussed them with IMS weekly, and reviewed them with facility administration monthly.

These metrics serve as a visual reminder of the initial barriers we faced, our progress over time, and any recurrent issues that required a more intense focus and discussion.

KPIs were tracked in conjunction with a central sterile process management program that included Lean process implementation, staff training and certification programs, inventory and equipment management, OR liaisons, and regular audits and adjustments of all processes. Lean processes implemented included:

- Linearized workflows
- Establishment of visual cues
- Elimination of non-value-added activities (excess steps or material usage).

Results measured over 6-month periods for 3 years are shown in the table, p 18.

A key objective was reducing the incidence of OR frictions, ie, factors that may negatively impact the OR, such as missing instruments, incomplete case carts, instruments not functioning properly, or insufficient instrument volume. Over the 3-year period, our success in this area was dramatic (figures, pp 18–19). Some of the variability in the monthly trends can be attributed to external factors such as department construction, employee turnover, and equipment maintenance.

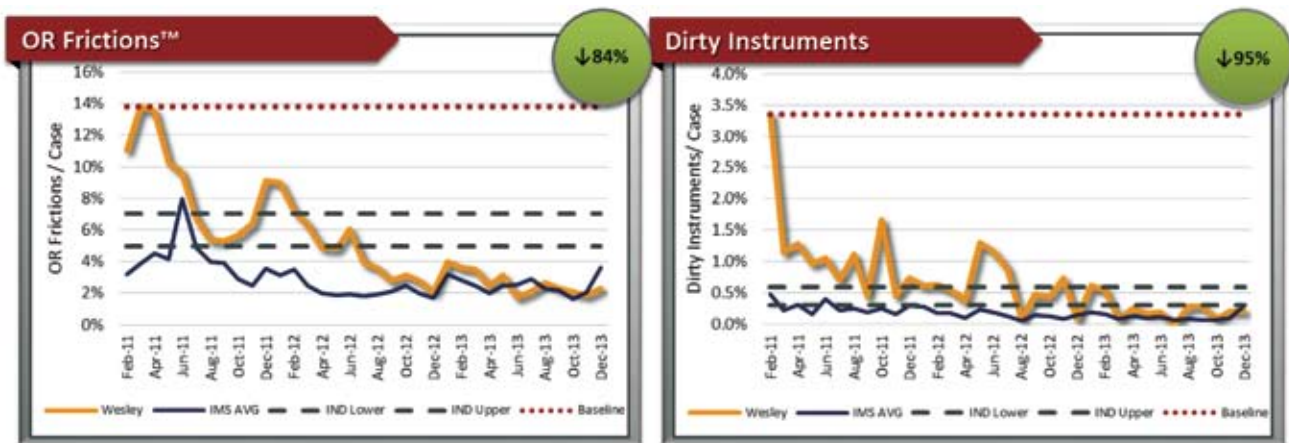
Continued on page 18

Performance improvement

WESLEY MEDICAL CENTER								
KEY PERFORMANCE INDICATOR (Metric)	Baseline	6-Month AVG (Month Ending)						%Δ
		2011		2012		2013		
		Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	Jan - Jun	Jul - Dec	
OR Frictions / Case	13.82%	9.93%	6.41%	6.37%	3.04%	3.08%	2.20%	-84.1%
Dirty Instruments / Case	3.34%	1.35%	0.85%	0.77%	0.45%	0.31%	0.18%	-94.6%
Daily AVG Unprocessed Trays / Daily AVG Processed	19.47%	9.31%	8.69%	9.33%	7.19%	5.86%	1.14%	-94.1%
Tray Errors / Total Sterilized Items	1.44%	1.05%	0.67%	0.61%	0.28%	0.29%	0.20%	-86.5%
Immediate-Use Sterilization / Total Sterilized Items	2.20%	1.62%	1.36%	1.22%	1.03%	0.78%	0.50%	-77.3%
Surgeon Satisfaction AVG	3.59	4.55	4.54	4.71	4.86	4.85	4.94	37.6%

Note: Based on 257 surgeon surveys. AVG = average; surgeon satisfaction survey scale: 1 = very dissatisfied; 5 = very satisfied.

Source: Reprinted with permission from Wesley Medical Center, Wichita, Kansas.



Continued from page 17

Lessons learned

All of these improvements were rewarding, but we learned that there is no quick fix for instrument readiness, surgeon satisfaction, and other instrument-related issues. Continuous assessment, training, communication, and intervention are required.

Top management must support change but cannot drive it. Even though this started as a top-down initiative, we continue to achieve our success from the bottom up. Everyone is actively participating: the OR and SPD technicians who monitor the boards daily, the su-

pervisors who manage the process, and the business managers and directors who champion continuous improvement and cultural changes. The C-level executives look forward to quarterly business reviews where we can monitor and evaluate our progress.

“Establishing effective communication between the OR and SPD was essential,” says Randall Smith, the IMS clinical operations manager who manages our SPD. “Everyone wanted the same final outcome, but at times there seemed to be a disconnect between the 2 teams, and it affected processes. Today we have a system that encourages open com-

munication, measurement, and assessment, and this has facilitated root-cause analysis when issues do occur. We now have shared goals and objectives between the OR and SPD, and we have built a cohesive team that shares feedback without blame.”

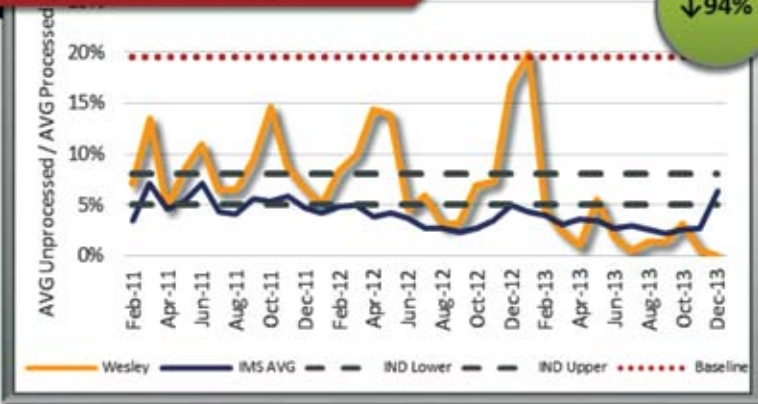
When instrument-related problems arise, our managers now have the tools to identify them quickly, work toward a collaborative solution, and move forward without blame or bad feelings.

Through this process, we learned a great deal about our surgical unit. For example:

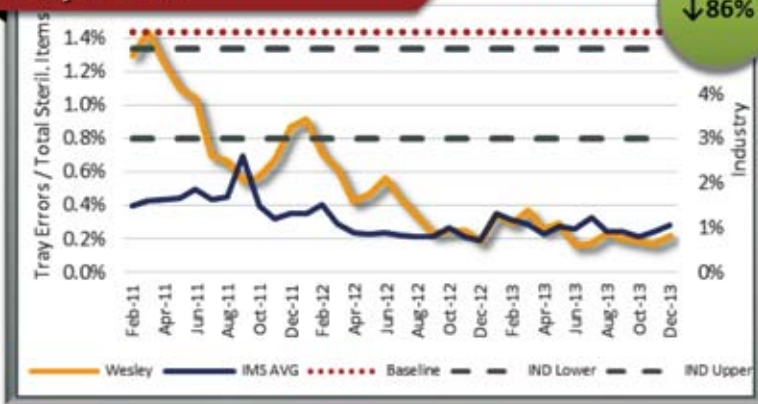
- By accessing IMS’ national database, we were able to ascer-

Performance improvement

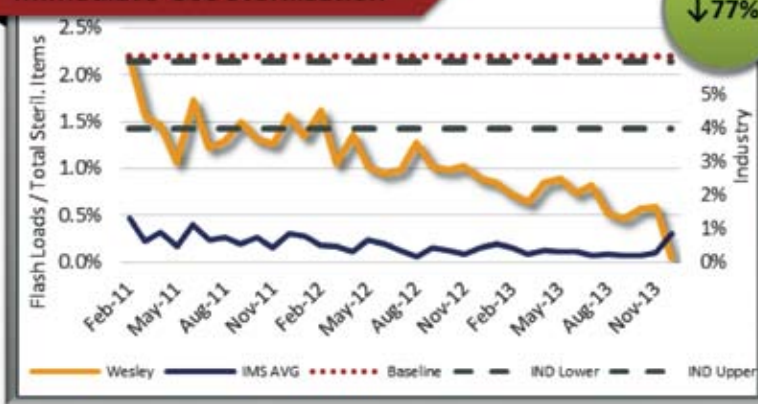
Unprocessed Trays



Tray Errors



Immediate-Use Sterilization



tain the length of the average instrument-related case delay. Using research showing that OR downtime costs an average \$60 per minute, we projected the true cost of our delays and prioritized accordingly.

- Weekly meetings between OR and SPD representatives allow us to review the weekly KPIs, discuss problems, and make adjustments. Meetings remind us that we share the same goals, and we're less tempted to de-

velop an "us versus them" mentality.

- Most instrument issues occur in orthopedics, so we focused more intensely on those trays.

"The improvements gained through this process helped to reduce delays to on-time starts and improved satisfaction among our surgeons," says OR staff member Logan Sorensen, RN. "The whole team worked together to make this happen."

The surgeon satisfaction surveys gave us valuable insight. "The surgeon satisfaction surveys have been more and more positive as instrument-related processes have been improved," says Cherise Becker, OR manager at Wesley. This feedback allows our executives to monitor our surgeons' attitudes in the context of national norms and to respond accordingly.

We adopted a culture of consistent communication and documentation, leading to a pattern of measurable success. Bridging the gap between our OR and the SPD teams is the key to sustainable process improvements. ❖

Kathy Neely,
MSN, MBA,
RN, is chief
nursing officer at
Wesley Medical
Center, Wichita,
Kansas.



References

<http://tinyurl.com/OREfficiency>

Garner P. Complexities in the operating room. Presented at the 2012 Industrial & Systems Engineering Research Conference.

Shippert R. A study of time-dependent operating room fees and how to save \$100,000 by using time-saving products. *Am J Cosmetic Surg.* 2005;22(1):25-34.

Meet us in

LONG BEACH

Long Beach Convention Center, CA
September 17-19, 2014

OR **MANAGER**[™]
CONFERENCE

The Premier Conference on Managing Today's OR Suite

ORManagerConference.com

Are you correctly using rigid sterilization containers for IUSS?

Although immediate-use steam sterilization (IUSS) is a safe method to sterilize emergently contaminated instruments, inappropriate use may lead to an increased risk for surgical site infection, according to a study in the American Journal of Infection Control. This study stated the only acceptable indicator for use of IUSS based on recommended practices is intraoperative contamination.

AORN states that rigid sterilization containers that have been validated for IUSS and cleared by the US Food and Drug Administration (FDA) for this purpose should be used. Always follow the written instructions for use (IFU) issued by the manufacturer of the instrument and rigid sterilization container.

Cleaning/decontamination

The rigid sterilization container should be cleaned after each use with the cleaning solution, tools, water quality, and methods recommended in the rigid sterilization container written IFU.

Components that should be removed for cleaning include the container lid, the filter protector/holder/retention plate from both ends, the disposable filter, interior baskets, chemical indicators (CIs), disposable labels, locks, and posts/dividers. Cleaning the valve-type closures (reusable filters) usually requires removal and reassembly. Load the container into the mechanical washer according to the container manufacturer's written IFU (eg, remove the lid and retention plate) to ensure contact of the cleaning solution and water with all surfaces.

If you are manually cleaning

Recommended practices help protect patients.

containers in the OR, use a soft lint-free cloth and a neutral-pH detergent. Cleaning solutions such as quaternary ammonium, phenolic germicidal detergents, or alcohol are not recommended, and the container's warranty may be voided if the wrong type of cleaning solution is used. Do not use abrasive cleaners, scratch pads, or metal brushes. Thoroughly rinse to remove all detergent.

Inspection

Inspect rigid sterilization containers after each use. The AORN Recommended Practice for Packaging states inspections should ensure the:

- mating surfaces and edges of container and lid are free of dents and chips
 - lid and container fit together properly and securely
 - filter retention mechanisms and fasteners are secure and not distorted or burred
 - latching mechanisms are functioning as they should
 - handles are in working order
 - integrity of the filter media is not compromised
 - gaskets are pliable, securely fastened, and without breaks or cuts
 - valves are in working order.
- Inspect single-use or reusable

filters and valve systems to ensure they are secure and in proper working order before sterilization.

Preparation

Packaging

Do not add materials such as mats or towels to the rigid sterilization container unless recommended in the container manufacturer's written IFU. For effective sterilization, follow the container manufacturer's written IFU to ensure the density of materials, weight, distribution, and lumen limitations are followed.

Do not place cassettes or organization trays with instruments inside the rigid sterilization container, and do not transfer a set of instruments provided in their own cassette/organization tray to a rigid sterilization container to avoid torn wrappers unless this procedure is described in the instrument/cassette/organization tray device manufacturer's written IFU. These changes may not have been validated by the original instrument manufacturer, so they should not be made unless the instrument/cassette/organization tray device manufacturer provides written information to do so. It is the ultimate responsibility of the instrument manufacturers to provide the IFU for effective sterilization of their medical devices.

Instruments should be positioned into the rigid sterilization container according to the instrument and container manufacturer's IFU to allow sterilant contact with all surfaces. Disassemble instruments if required, position instruments with concave or convex

Continued on page 22

Continued from page 21

surfaces to prevent retention of water, and use racks or a stringer to open or unlock instruments. The total weight of instrument containment devices, including the contents, should not exceed 25 lb.

Placement of chemical indicators

According to AAMI ST79 and AORN's Selection and Use of Packaging Systems for Sterilization, chemical indicators (CIs) should be placed in an area of the rigid sterilization container that presents a challenge for air removal and sterilant contact. Consult with the manufacturer of the rigid containers for the appropriate number of CIs and placement. This information should be provided in the container manufacturer's written IFU. The AORN Recommended Practice for Sterilization states to use either a Class 5 or Class 6 internal CI. Remember that Class 6 CIs are cycle-specific and "should be used only in the specific cycles for which they are labeled." A Class 1 CI should be placed on the outside of each rigid container to identify that the container went through the IUSS cycle.

Package labeling

Assign a lot number to each IUSS load, and record that in a load record system used for each cycle. Small record cards that attach to the rigid sterilization container are available, and some will provide space for a lot identification sticker.

Sterilization parameters

The sterilization parameters in the instrument and rigid sterilization container manufacturer's written IFU should be used. If

they do not agree, follow the instrument manufacturer's IFU since it is the manufacturer's responsibility to validate the sterilization cycle for their instruments/instrument sets. Do not use a cycle that is shorter than the cycle recommended by the rigid sterilization container manufacturer. If no IUSS cycle is listed, contact the instrument manufacturer to determine if that cycle can be used. Do not be surprised if the answer is no. With IUSS there is no dry time, so instruments are wet on the inside and outside after the cycle. This condensation, with repetitive use of IUSS, may cause instruments to rust, which reduces their use life and increases costs because they must be replaced.

Do not eliminate the dry time unless recommended by the instrument manufacturer, and do not shorten the recommended sterilization time. The same sterilization parameters should be used for IUSS as for terminal sterilization, except that IUSS has a 0 or reduced dry time. Some powered instruments may have a slightly longer dry time for IUSS to minimize the chance of condensation inside the powered instruments. Do not change the sterilization or dry time recommended for the IUSS cycle.

After the sterilization cycle, examine the integrity of filter plates. Do not use the contents of the container if the filters are not intact or if they are damp, dislodged, or have holes, tears, or punctures.

Read the physical monitors and external CI before the container is transferred to the sterile field or opened. If either result suggests inadequate steam sterilization processing, do not use the contents of the rigid sterilization container.

Transfer of instruments to sterile field

The Multi-society Immediate-Use Steam Sterilization statement states that "immediate use" is broadly defined as the shortest possible time between a sterilized item's removal from the sterilizer and its aseptic transfer to the sterile fields. The sterilized item is:

- used during the procedure for which it was sterilized
- used in a manner that minimizes its exposure to air and other environmental contaminants
- not stored for future use
- not held from 1 case to another.

Read the internal CI before the rigid sterilization container is transferred to the sterile field. If the CI suggests inadequate steam sterilization processing, do not use the contents. This process will keep you from having, at a minimum, to remove the entire instrument set or any other instruments that came in contact with the contaminated instrument from the sterile field and change gloves if any team member touched the contaminated items.

As soon as the rigid sterilization container is transferred to the sterile field, remove the in-

Join us on LinkedIn!

Be part of the discussion as a member of OR Manager's LinkedIn Group!

Share your ideas for:

- *managing noise and disruption*
- *scheduling for a hybrid OR*

Or start your own discussion!

Go to www.linkedin.com.

Click Groups at the top of the page, and search for OR Manager.

Sterilization & infection control

struments so they are not stored for future use or held for the next case. Rigid sterilization containers cleared by the FDA for IUSS do not have a claim for sterile storage because they are wet. In addition, if the wet instruments are stored, the instruments are not considered sterile and may rust, posing a patient safety problem.

If you are not correctly using rigid sterilization containers for IUSS, it's time to follow the recommended practices and IFU to protect your patients. ❖

—Martha Young, MS, CSPDT
President, Martha L. Young, LLC,
providing SAVVY Sterilization So-
lutions for Healthcare
Woodbury, Minnesota

Martha Young is an independent consultant with long experience in

medical device sterilization and disinfection.

References

AORN. Recommended practices for selection and use of packaging systems for sterilization. Recommendation IV, V, VIII. Perioperative Standards and Recommended Practices. Denver, CO: AORN, 2013. www.aorn.org

AORN. Recommended practices for sterilization. Recommendation VII. Perioperative Standards and Recommended Practices. Denver, CO: AORN, 2013. www.aorn.org

Association for the Advancement of Medical Instrumentation. Comprehensive guide to steam sterilization and sterility assurance in health care facilities. ANSI/AAMI ST79:2010 & A1:2010 & A2:2011 & A3:2012 & A4:2013. www.aami.org

Association for the Advancement of Medical Instrumentation. Multi-society Immediate Use Sterilization position statement. <http://www.aami.org/publications/standards/st79.html>

Rigid Container Systems (Part I), IAHCMM Communique: July/August 2010. http://iahcsmm.org/Recertification/LessonPlans/CIS_lessonPlans/CIS_Lessons/CIS_220.html

Rigid Container Systems (Part II), IAHCMM Communique. September/October 2010.

http://iahcsmm.org/Recertification/LessonPlans/CIS_lessonPlans/CIS_Lessons/CIS_221.html

Zuckermann S, et al. An evaluation of immediate-use steam sterilization practices in adult knee and hip arthroplasty procedures. *Am J Infect Cont.* 2012;40:866-871.

Prevent Infections and Assess Risks in Your Surgical Settings

ECRI Institute provides a wide array of resources and consulting to ensure the safety, quality, and cost-effectiveness of your surgical services, including:

- ▶ Infection Prevention Consulting
- ▶ Patient Safety and Risk Assessment Services
- ▶ Accident Investigation
- ▶ Technology Acquisition Assistance including Infection-related Impact

Contact us to learn more about our surgical safety services by phone at (610) 825-6000 or email to clientservices@ecri.org.

ECRIInstitute
The Discipline of Science. The Integrity of Independence.

Changes in nurses' pay structure solve staffing and scheduling problems

Many OR directors struggle with designing effective nurse compensation systems. The ideal system would achieve department goals while maintaining nurse satisfaction. Unfortunately, a compensation plan that links these 2 objectives is often elusive.

In 2012, OR leadership at a small Pennsylvania hospital developed a compensation system that effectively aligns nursing incentives with the operational needs of surgical services. Although the new system may increase labor costs, it has a strong positive effect on nursing satisfaction, OR schedule management, and overall perioperative performance.

Common challenges

Hospital ORs require a flexible staffing structure to accommodate schedule fluctuations. Flexibility is particularly important for ORs with changing case volumes.

DuBois Regional Medical Center (DRMC) is a 200-bed community hospital in DuBois, Pennsylvania. Between fiscal years 2012 and 2013, surgical case volume at the hospital increased approximately 5%. According to Mary Beth Reese, RN, CNOR, director of perioperative services, this expansion in volume has come with growing pains.

"We are a small hospital, but the OR has been getting busier," Reese says. "The hospital has been recruiting more surgeons, and we are doing more operations. As a result, we have seen our hours extending later into the afternoon."

DRMC staffs 7 general surgery ORs and 1 urological specialty suite. Cases begin at 7 am, but a late crew works from 8:30 am to 5 pm. The late crew provides break

“
Late hours are spread out among staff.
”

and lunch coverage for the main shift and staffs 2 ORs during the draw-down between 3 and 5 pm.

"Our goal is to get all the scheduled cases done by 5 pm, but add-ons, case overruns, and other issues frequently force the schedule to run late," Reese says. "We were asking staff to stay late in 2 to 3 rooms every day."

Like many surgical services directors, Reese found that overtime (OT) pay is not a magic bullet. Some nurses have trouble working late, regardless of incentives. But according to Reese, another factor came into play.

"OR staff on call may end up working until 8 or 9 at night," Reese says. "After 12 or 13 hours in the OR, that nurse would be called off for patient safety reasons. But after missing the next day, the nurse may or may not have covered the full 40 hours for the week."

The net effect is lower compensation with more personal disruption. "The nurse would end up short by 4 or 5 hours," Reese says. "It was like being penalized for being on call."

In addition, OT pay at DRMC did not always reflect the difficulty or inconvenience of working additional hours. Because of idiosyncrasies in the schedule and compensation system, nurses

sometimes received only regular pay for challenging call shifts.

Overall, finding nurses to work late was difficult, and call shift pay was seen as unfair. Although pay incentives were in place, they were not well aligned with the needs of the surgery department.

The DRMC solution

In 2012, Reese addressed these scheduling problems by introducing a pair of key changes to the OR compensation system.

Guaranteed full-week pay. First, Reese established guaranteed pay for 40 hours per week for all OR nurses. Nurses receive full pay, regardless of actual worked hours.

Here is an example of how it works: Say several add-on cases require an OR to stay open past the schedule. Reese asks 2 nurses to stay late to accommodate the additional procedures. Those nurses work an additional 4 hours and receive premium pay for this overtime. For safety reasons, the nurses are asked to stay home the next day, missing out on 8 hours. The pay period total for each nurse is 36 hours, so under the salary guarantee each nurse receives 4 hours of "non-productive pay time." Bottom line: The nurses are rewarded for their OT hours and not penalized for the resulting schedule fluctuations.

"The salary guarantee ends up being an effective incentive for nurses to stay late and finish up the schedule," Reese says. "If a room runs over, nurses are now very willing to stay."

New OT structure. Currently, many hospital ORs use an "8 and 80" OT system—nurses earn premium pay after 8 hours on any shift and after 80 hours during

OR business performance

OR nurse compensation at DuBois Regional Medical Center

Feature	Details	Advantages
Salary guarantee	OR nurses guaranteed pay for 40 hours/week, regardless of actual worked hours	<ul style="list-style-type: none">> Staff who work late (and miss the next day) are not penalized> Incentives are aligned with OR needs
Overtime pay	Nurses receive premium pay for time over 8 hours/day and 40 hours/week, with week beginning Monday at 7 am	<ul style="list-style-type: none">> In most cases, weekend call shift compensated at premium pay> OT better reflects disruption/difficulty of weekend call

any 2-week period. DRMC uses a 40-hour system, with OT pay after 40 worked hours in any week (sidebar). This arrangement provides staff with greater opportunity for premium pay, but recognizing that the system is not perfect, DRMC sought to make some changes. Previously, pay weeks began and ended at 7 am on Saturday. Because any call hours staffed over the weekend fell at the beginning of the pay period, weekend call work was compensated at the regular pay rate.

In 2012, Reese changed the new pay period start from Saturday morning to Monday morning. "Now, nurses typically hit 40 hours at 3:30 pm on Friday, so if you are on call that weekend, premium pay kicks in right away," she says. "Most nurses can earn time-and-a-half for any time they come in Friday evening, Saturday, or Sunday."

According to Reese, the new OT system was a "huge hit" with staff nurses. "In our hospital, nurses on call typically work 11 to 16 hours per weekend, often covering difficult orthopedic and GI cases," she says. "The new pay system is seen as more fair by nurses. It offers better recognition and reward for how hard they are working during these shifts."

Several benefits

The compensation changes at DRMC have helped spread late

hours more evenly among the staff. "Previously, it ended up being the same people who would stay late," Reese says. With more staff members willing to cover extra hours, there is less risk of burning out individual nurses.

The new pay system has also given Reese the latitude to reward the department as a whole on appropriate occasions. "If we are having a slow day, I can let people go home earlier. On Christmas Eve, for example, the schedule was done at 1 pm. Previously, closing up early would have forced some staff to take time off with no pay, maybe supplementing it with paid time off. Now, staff can leave a little early on these light days and not worry about being shorted on hours."

The new system also makes it easier for Reese to manage the schedule, particularly in the "gray area" between 2 pm and 3 pm. Previously, cases added on at this time might have been held for a late room or even pushed back until 5 pm. "Now, we have a lot of people who are able to stay and get the case done right away," she says. "Surgeons are happy because they don't have to wait to start the case, and it's also better for patient satisfaction."

Managing the downside

An obstacle to implementing guaranteed pay in an OR is the potential for perceived ineq-

uity with the rest of the hospital's nursing staff. OR directors should emphasize the unique scheduling challenges of surgical services and show how a pay guarantee can support department efficiency, physician relations, and patient satisfaction. In addition, directors should make sure non-OR staff also have appropriate opportunities for OT and bonus pay.

Higher labor costs are another obstacle. According to Reese, OR salary costs at DRMC have increased approximately 5% to 7%. But she says it is important to weigh these increases against other gains—a better ability to accommodate cases earlier in the day, higher staff satisfaction, and better service to surgeons and patients.

This calculation is particularly important for small but growing ORs. "A lot of bigger hospitals have a 3 to 11 pm shift, but we don't have enough volume to put on an extra shift full time," Reese says. The new incentive structure allows smaller ORs to manage end-of-day schedule pressures effectively with only an incremental investment in labor costs. "The amount of money we are paying out under these new incentives is less than the cost of hiring 2 or 3 more staff, so for us it represents a very economical

Continued on page 26

OR business performance

Continued from page 25

approach to solving our schedule issues.”

For some ORs, this incentive approach could help reduce agency costs. DRMC does not use agency nurses, but Reese’s compensation system could help many ORs cut agency utilization. Using the system to improve pay fairness could also help reduce staff turnover. For many organizations, lowering turnover by just a few percentage points would more than pay for the additional salary costs.

Art of management

Balancing the trade-off between salary costs and performance outcomes is part of the art of management. Different surgical services leaders will come to dif-

ferent conclusions. But for many organizations, the compensation system adopted at DRMC represents a viable strategy for aligning nurses with the clinical and business goals of the OR. ❖

This column is written by the perioperative services experts at Surgical Directions (www.surgicaldirections.com) to offer advice on how to grow revenue, control costs, and increase department profitability.

Get Your CE Credits!

Each issue of OR Manager is preapproved for 3.0 nursing contact hours for registered nurses.

To complete an online post-test and earn continuing education (CE) credits, simply login to

www.ormanager.com

and go to My Account. Click on “My Courses” and click into the issues.

Need help? Contact clientservices@accessintel.com.

OR Manager Presents...

Improving OR Performance, Third Edition

In this book, you will find how successful surgical services leaders are improving their departments’ performance. The module’s seven chapters touch on issues that are crucial to effective management of surgical services, such as benchmarking, OR performance, maximizing patient flow, and more.

The table of contents includes:

- OR Throughput
- Surgical Services Governance
- Surgical Scheduling
- Perioperative Process
- OR Financial Management
- Surgical Supply Chain
- Physician Preference Items

Subscribers to OR Manager save \$20 on this popular resource, simply using promo code PORM01 during check out online or by calling 1-888-707-5814.



www.ormanager.com

OR Manager | 4 Choke Cherry Road, 2nd Floor | Rockville, MD 20850
Tel: 1-888-707-5814 | Email: clientservices@accessintel.com

2212

OR BUSINESS MANAGEMENT CONFERENCE 2015

February 17-19, 2015 | DoubleTree Orlando Downtown | Orlando, Florida



Save the Date

Plan now to join your fellow operating room business managers, directors, and professionals at the 2015 OR Business Management Conference, February 17-19, 2015 in Orlando.

Get hands-on education to increase your knowledge of OR processes, develop ways to increase efficiencies in surgical services, and network with colleagues during this event! During group breakout sessions and workshops, you will work on projects to hone your problem-solving and strategic planning skills.

You'll want to have your whole team there to cover all of the breakout workshops and sessions so you won't miss out on a single thing.

SU	MO	TU	WE	TH	FR	SA
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

February 2015

www.ormanager.com/managementconference

Ambulatory Surgery Centers

Decisions, decisions: Should you outsource coding to comply with ICD-10?

The primary function of an ambulatory surgery center (ASC) is simple and easily described: to perform surgery for which patients can be discharged within 24 hours, to do this efficiently, safely, and cost effectively, and to collect adequate, timely payment.

The path to achieving these results is not so simple.

To be paid for a procedure, an ASC must submit a claim to an insurer or to the Centers for Medicare & Medicaid Services (CMS) with very specific information about the procedure—not in words, but in codes of letters and numbers.

Some physicians have made the effort to learn how to code claim forms for their specialties and the various services they provide, but these physicians are the exception rather than the rule. Most ASC employees, like their hospital counterparts, have too many other responsibilities and interests to get involved in coding. Even many

The new system will have some 70,000 ASC codes.

billing professionals, who work with the codes when submitting claims, often find the vast array of codes intimidatingly complex.

Later this year, the stakes will rise when the US healthcare system converts to the global code standard, International Classification of Diseases-10 (ICD-10), and related procedural codes. The new system will contain an estimated 155,000 codes, though “only” about 70,000 will apply to ASCs.

Many ASC managers are saying, “Perhaps it’s time to call in a specialist.”

More than a detail

“Not everyone is a coder,” explains Reacal Martin, herself a coder. She is 1 of 126,400 members of the American Academy of Professional Coders (AAPC) in Salt Lake City, which certifies medical coders, billers, auditors, and practice managers. Martin was part of an AAPC team that developed a test for the ASC coding credential. “The coding world is not as simple as the world believes,” she says.

Coding is a team effort, with each specialty making a contribution. Whenever a patient receives treatment, the provider must document the service. A coder’s job is to translate the information in the documentation into codes based on details of the specific procedure. The codes also incorporate laboratory tests, imaging, and information from the patient’s medical record. The codes appear on the claim or bill to back up the charges. “It always goes back to the documentation,” Martin notes. “A coder is only

Ambulatory Surgery Advisory Board

Lee Anne Blackwell, EMBA, BSN, RN, CNOR
Vice president, clinical services,
Practice Partners in Healthcare, Inc,
Birmingham, Alabama

Nancy Burden, MS, RN, CAPA, CPAN
Director, Ambulatory Surgery, BayCare
Health System, Clearwater, Florida

Rebecca Craig, BA, RN, CNOR, CASC
CEO, Harmony Surgery Center, Fort
Collins, Colorado

Stephanie Ellis, RN, CPC
Ellis Medical Consulting, Inc
Brentwood, Tennessee

LeeAnn Puckett
Materials manager, Evansville Surgery
Center, Evansville, Indiana

Donna DeFazio Quinn, MBA, BSN, RN, CPAN, CAPA
Director, Orthopaedic Surgery Center
Concord, New Hampshire

Mary Stewart, BSN, RN
Chief Clinical Officer, Springfield Clinic,
Springfield, Illinois

Debra Stinchcomb, BSN, RN, CASC
Consultant, Progressive Surgical Solutions, LLC, Fayetteville, Arkansas



Ambulatory Surgery Centers

What codes mean

If an audit reveals repeated errors in coding of claim forms, an ambulatory surgery center (ASC) faces a couple of risks; either it is underreporting its services and thus losing money, or it is overreporting them and subjecting itself to liability for noncompliance, or even fraud.

As US healthcare providers begin the transition to ICD-10 during 2014, there will be more room than ever for error. To illustrate, an ASC audit by The Coding Network revealed these wrong codes for a hammertoe repair: use of an obsolete modifier, "SG"; 2 wrong codes; and a missing modifier for the second right toe, "T6."

CPT codes for services that an ASC is likely to provide include the following:

- Evaluation and management: 99201–99499
- Anesthesia: 00100–01999; 99100–99150
- Surgery: 10021–69990
- Radiology: 70010–79999
- Pathology and laboratory: 80047–89398
- Medicine: 90281–99099; 99151–99199; 99500–99607

For specific transactions, the codes under ICD-9 have 3 to 5 digits, and they may be alpha or numeric. If the first digit is a letter, it may be only E or V. The first 3 digits indicate the procedural or diagnosis category; the final 2 indicate the anatomic site and severity.

Under ICD-10, codes will be up to 7 digits, with different alphanumeric combinations, and offer more detailed information about the case. The following example from the American Medical Association shows how the longer code for a treatment of a broken arm contains more specific detail:

S52	Fracture of forearm
S52.5	Fracture of lower end of radius
S52.52	Torus fracture of lower end of radius
S52.521	Torus fracture of lower end of right radius
S52.521A	Torus fracture of lower end of right radius, initial encounter for closed fracture

The first 3 characters, S52, indicate the category. The fourth and fifth characters of 52 add clinical detail and anatomic site. The sixth character, 1, indicates laterality (right radius). The seventh character, A, is an extension that provides additional information, which means "initial encounter" in this example.

as good as the documentation."

For that reason, she is gratified when physicians take an interest in coding. Martin works with The Coding Network, a company in Beverly Hills, California, that provides outsource coders to ASCs. Lately, she has been working with a group of neurosurgeons, 1 of whom is a very good coder. "I was excited to hear that 1 physician felt it was important enough to take a class directly after medical school," she says.

As the AAPC website notes, a coder's training starts with an understanding of anatomy and medical terminology. Then the coder must master the provisions in various insurance plans and regulations.

The codes themselves are developed and published by the American Medical Association (AMA), in Current Procedural Terminology, known as the CPT code book. Various versions sell online for about \$100. CMS and

most insurance companies follow the CPT codes, but insurers may add or modify rules or create exceptions.

Budgets and revenues

There are many factors to consider when deciding whether to outsource, but the principal one is typically financial.

If payments are not processed quickly enough, or if claims are

Continued on page 30

Continued from page 29

returned because of faulty codes, the ASC could lose money.

The goal, Martin says, is to maximize reimbursement through rapid, accurate submission of claims. "The reason outsourcing is a great option for surgery centers," she says, "is that the turnaround time is wonderful. I have 24 hours from the procedure report to when the bill is transmitted."

However, part of the debate over whether to outsource is that for some managers it may appear to be an added expense. Cross training the billing staff may seem more economical than paying others to do the coding.

The AAPC estimates the average monthly salary for a certified coder is \$3,500, as does the job website Indeed.com. The Coding Network estimates that taxes and benefits bring the monthly average to more than \$5,000. In contrast, The Coding Network charges a flat \$17 per case up to 100 cases per month, and then fees decline with increasing volume.

Compliance concerns

Deciding whether to outsource coding is not only about money, however; it's also about convenience. Contract coding providers offer vacation coverage, training, and auditing services.

More critically, they offer protection from legal liability that could arise from failure to comply with coding and billing regulations. In the past, health-care providers have been charged with criminal offenses in cases of repeated coding errors. For example, choosing the wrong code could result in upcoding, or

charging for a higher level service than was performed.

Any decision to bring in outside coders should begin with a thorough assessment of the present situation. AAPC and other professional associations, along with Internet research, can identify outside auditors specializing in ASC procedures.

Choosing an outsource coder

Regardless of their employment status, coders are subject to patient privacy laws. There is no substitute for independent research before selecting a coder. An organization with staff based outside the US may present a risk of violation of the Health Insurance Portability and Accountability Act (HIPAA), so it is important to ask about location.

Coders should be certified by AAPC or a similar organization to ensure that they have regular training and current knowledge.

Expertise will be more critical than ever as the industry prepares to convert from the current ICD-9 codes to ICD-10 beginning October 1.

The new codes will be longer and more complex, covering more detailed diagnostic and procedural information to conform to World Health Organization standards. ASC staff will need to be trained and claim systems will need to be upgraded (as will those of insurers) to make the transition.

—Paula DeJohn

References

- American Medical Association. Fact Sheet 2: Preparing for the ICD-10 code set: October 1, 2014 compliance date. 2012:2. www.ama-assn.org.
- The Coding Network. Confidential coding review for ambulatory surgery center, June 16, 2009. <http://www.codingnetwork.com/medical-coding/outsource-coding-analysis/>

Make Your Thursdays More Productive

Participate in an OR Manager webinar and invite your managers and staff to join you.

2 pm eastern

Regular webinars, 1 hour in length, explore topics of professional importance for OR directors and managers and OR business managers.

Earn 1 contact hour.

For a webinar calendar, go to www.ormanager.com

Join us for a productive Thursday.



OR Manager

presents

eLearning Courses for the Management of the Surgical Suite

OR Manager is proud to present eLearning courses, designed with your busy schedule in mind. These courses were created from popular OR Manager Conference sessions and recordings, and are pre-approved for up to 28 contact hours.

Course	CEUs
Surgical Services Administration eLearning Course	5
OR Business Management eLearning Course	4
New OR Manager eLearning Course	5
Clinical and Patient Safety eLearning Course	5
Ambulatory Surgery Center eLearning Course	4
Communication/Professional Development eLearning Course	5
OR Manager eLearning Course Bundle (best value!) <i>Includes all eLearning courses in one convenient package for just \$495.</i>	28

Get up to
28 CEUs!

Each eLearning course, presented by speakers and instructors from the OR Manager Conference, includes multiple presentations and topics.

Benefits of eLearning:

- **Learn at your own pace** – you have 90 days to complete the course, and you can review and go back through the course as many times as you need.
- **Up to 28 CEUs** to enhance your professional development and meet certification requirements.
- **Cost-effective and flexible** – no travel required!

Register for an eLearning course today!

At a Glance

Cranial reconstruction technique reduces complications

Johns Hopkins surgeons have devised a better, safer method to replace a bone flap removed from a patient's skull to accommodate brain swelling caused by injury, infection, tumor, or stroke.

Traditionally, surgeons have peeled the scalp off the brain and tucked the bone flap back into place, putting the patient at risk for bleeding, seizure, stroke, and infection.

In the new technique, surgeons pull back only the top 3 layers of the 5-layer scalp, and sandwich the bone in between, which reduces infection risk by providing the bone flap access to blood supply from the top and bottom.

—http://journals.lww.com/neurosurgery/Abstract/publishahead/Multidisciplinary_Approach_for_Improved_Outcomes.98129.aspx

Personal attestation improves checklist compliance

A surgical checklist format in which each member of the OR team provides a personal attestation improves compliance and may contribute to improvement

in the culture of teamwork in an OR, a study finds.

A surgeon-led pause resulted in only 54% completion of all items on the checklist, compared with 97% after implementing a new format in which all OR team members stopped for the pause, spoke their full names, and attested to the checklist components they identified with.

—Porter A J, Narimasu J Y, Mulroy M F, et al. *Jt Comm J Qual Patient Saf.* 2014;40(1):3-9.

Composite measures better profile bariatric surgery performance

Composite measures are better at explaining hospital variation in serious complications and predicting future performance with laparoscopic gastric bypass than other approaches, a study finds.

Included in the composite measures were:

- serious complications, reoperations, and readmissions
- hospital and surgeon volume
- outcomes with other related procedures.

The composite measures explained 89% of variation, compared with 28% for risk-adjusted complication rates alone. When ranked on

the composite measures, bottom-ranked hospitals had 2-fold higher serious complication rates compared with top-ranked hospitals. Differences in serious complication rates between hospitals were much smaller when ranked by serious complications and hospital volume.

—Dimick J B, Birkmeyer N J, Finks J F, et al. *JAMA Surgery.* 2014;149(1):10-16.

Colon surgery at high-volume hospitals linked to better recovery

Patients having colorectal surgery at high-volume hospitals are significantly more likely to return home than patients at low-volume hospitals, finds a study.

Researchers from the Michael E. DeBakey Veterans Affairs Medical Center and Baylor College of Medicine, Houston, analyzed 280,644 patients in the 2008 Nationwide Inpatient Sample database who had colorectal resections and survived to discharge.

The odds of discharge to home vs skilled facilities were significantly greater in high-volume hospitals compared with low-volume hospitals.

—<http://archsurg.jamanetwork.com/article.aspx?articleid=1813805>