Choosing which practitioner sees the next patient in the preanesthesia clinic

Many preanesthesia clinics are constrained as to the number of patients that can be seen during a day because of space and labor limitations. Researchers from the University of Iowa, Iowa City, University of Michigan, Ann Arbor, and Jefferson Medical College, Philadelphia, sought to determine whether efficiency could be enhanced by better management of patients in the waiting room. They hypothesized that, because practitioners differ in how quickly they evaluate patients, it might help to have the slowest practitioner do evaluations only when the number of waiting patients exceeds a certain threshold.

First, they reviewed studies that have identified conditions for which management of the queue can be beneficial. Then they used data from a preanesthesia evaluation clinic to test whether those conditions are typical for preanesthesia evaluation. They found that the fastest practitioner was 1.23 times faster than the second fastest and 1.61 times faster than the slowest practitioner. However, these were significantly less than times that would be large enough to warrant patient queue management—3 and 2 times faster, respectively.

The researchers concluded that practitioner speeds in evaluating patients do not differ enough to warrant choosing who evaluates the next patient. Clinics that want to reduce patient waiting should focus on reducing the overall mean evaluation time, scheduling patients appropriately, and having the right numbers of nursing assistants and practitioners.


http://www.anesthesia-analgesia.org

Transfer of C. difficile spores by improper wipe selection, use

Effective disinfection of contaminated surfaces is necessary to prevent transmission of Clostridium difficile spores. Because C. difficile spores are resistant to many disinfectants, such as quaternary ammonium compounds, current guidelines recommend the use of sporicidal products such as sodium hypochlorite.

However, health care facilities continue to use nonsporicidal products for equipment that may be damaged by exposure to sodium hypochlorite. In this study, researchers from Case Western Reserve University and Veterans Affairs Medical Center, Cleveland, examined the potential for transfer of C. difficile spores by wipes if not sporicidal or used correctly.

Four wipes were tested: Fresh Clorox (sodium hypochlorite) wipes, used Clorox wipes, Kimberly-Clark Kimtech wipes saturated with quaternary ammonium compound (Virex II 256, Johnson-Diversey), and Kimtech wipes saturated with sterile water.

Transfer of spores was evaluated by inoculating a clean surface with C. difficile spores.

Use of fresh Clorox wipes with 5 minutes of contact with C. difficile spores reduced spores to undetectable levels at the inoculum site, with no transfer of spores to clean sites.

Large numbers of spores were transferred to clean sites when the Kimtech wipes saturated with quaternary ammonium compound or water were used.

Used Clorox wipes transferred spores to clean sites but in much lower quantities than the Kimtech wipes.

When fresh Clorox wipes were used, but contact with spores was minimal, they transferred large quantities of spores.

It is important for infection control practitioners to be aware that nonsporicidal wipes can trans-
fer spores from contaminated to clean surfaces, and
improper use of hypochlorite wipes also can reduce
effectiveness, the authors say.


http://press.uchicago.edu/ucp/journals/journal/iche.html

OR efficiencies

Re-engineering the OR using variability methodology

Variation in patient flow through ORs impacts a
hospital’s performance and finances. Natural variation
(emergency or unscheduled cases) and artificial varia-
tion (scheduled cases) require different resources and
management.

Researchers from the Mayo Clinic in
Jacksonville, Florida, hypothesized that by using
operations management principles and variability
theory, they could expand the capacity of their ORs
and increase surgical throughput without construct-
ing additional ORs.

Researchers gathered data on patient flow for all
scheduled and unscheduled cases over 3 months. They
developed mathematical models to allocate rooms for
urgent/emergent, work-in, and elective cases.

Services were allocated block time based on
80% prime time use. Prime time was defined as 7:30
am to 5:00 pm. Block time was assigned to ensure
that cases were evenly distributed throughout the
week to avoid peaks and valleys in daily volume.

After implementation, 12 months of data
were compared with the previous 12-month period.
Results showed:

• surgical volume increased 4%
• surgical minutes increased 5%
• prime time use increased 5%
• overtime staffing decreased 27%
• day-to-day variability decreased 20%
• elective schedule same-day changes decreased 70%
• staff turnover decreased 41%
• net operating income improved 38%

• net margin improved 28%.

The researchers concluded that variability man-
agement results in improvement in OR operational
and financial performance.


http://www.sciencedirect.com/science/jour-
nal/10727515/216/4

Patient safety

Surgical never events linked to increased costs, patient harm

To incentivize patient safety in surgery, payers are
increasingly focusing on “never events” (ie, retained
surgical items, wrong site, wrong patient, and wrong
procedure) as metrics of quality care. However, little
is known about their costs to the health care system,
outcomes of patients, or characteristics of the provid-
ners involved.
This study, led by researchers from the Johns Hopkins University School of Medicine, Baltimore, found that for 9,744 never events occurring between 1990 and 2010, malpractice payments totaled $1.3 billion. The highest median payment was associated with wrong-procedure events ($106,777), and the lowest was $33,953 for retained surgical items. Increased payments were associated with severe patient outcomes and physicians with multiple malpractice reports.

Physicians between 40 and 49 years of age accounted for 35.8% of all never-event reports, and never events occurred most commonly in patients 40 to 49 years of age. Mortality occurred in 6.6% of patients, permanent injury in 32.9%, and temporary injury in 59.2%.

The researchers concluded that surgical never events are costly to the health care system and associated with serious patient harm.


Outcomes of surgeries performed after overnight trauma shift

Surgical residents have been restricted to an 80-hour week since 2003, when the Accreditation Council for Graduate Medical Education imposed work limita-

tions, but no restrictions have been instituted for attending surgeons.

This study by researchers from the University of Tennessee Health Science Center, Memphis, investigates how working an overnight trauma shift affects outcomes of general surgery procedures performed the next day by the post-call attending surgeon. Procedures included hernia repairs, cholecystectomies, and intestinal operations.

Of 869 patients included in the study, 132 were performed post-call and 737 were performed non-post-call.

Procedures performed post- and non-post-call did not differ with respect to complications (13.7% vs 13.5%) or readmissions within 30 days (5% vs 6%).

Multivariate analysis did not identify an association between post-call procedures and the development of adverse outcomes.

The researchers concluded that performance of general surgery procedures the day after an overnight trauma shift did not affect complication rates or readmission rates. At this time, there is no compelling evidence that work-hour restrictions for attending general surgeons would improve surgical outcomes.


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Timing of preop antibiotic not linked to SSIs

Prophylactic antibiotic timing for surgical procedures is a nationally mandated quality metric used for public reporting and performance-pay initiatives, but evidence supporting its effectiveness in reducing surgical site infections (SSIs) is limited.

This study, led by researchers from Birmingham Veterans Administration Hospital, Birmingham, Alabama, assessed the association between prophylactic antibiotic timing and SSI occurrence.

Data on nearly 32,500 hip or knee arthroplasty, colorectal, arterial vascular, and hysterectomy procedures performed in Veterans Affairs Hospitals between 2005 and 2009 were used in the study.

Antibiotic timing included a median of 28 minutes before incision, within 60 minutes of incision, and more than 60 minutes before incision.

A significant association was found between choice of antibiotic and SSIs in orthopedic and colorectal patients, but there was no relationship between SSIs and prophylactic antibiotic timing.

The researchers concluded that timing of prophylactic antibiotic administration is not significantly associated with the occurrence of SSIs.

The technique of performing coronary artery bypass grafting (CABG) on a beating heart (off-pump) was developed to reduce perioperative complications, some of which may be related to the use of cardiopulmonary bypass and cross-clamping of the aorta associated with on-pump CABG.

To evaluate the effects of off-pump CABG, investigators conducted a large, international study—the CABG Off or On Pump Revascularization Study (CORONARY). A total of 4,752 patients at 79 centers in 19 countries were enrolled.

The researchers previously reported no significant difference at 30 days in the rate of a primary composite outcome of death, myocardial infarction, stroke, or renal failure between the two techniques.

This article reports results on quality of life and cognitive function as well as clinical outcomes at 1 year.

There was no significant difference in the composite of clinical outcomes between off-pump and on-pump CABG—12.1% and 13.3%, respectively.

The rate of repeat revascularization at 1 year was 1.4% in the off-pump group and 0.8% in the on-pump group, not a significant difference.

There were no significant differences between the two groups at 1 year in quality of life or neuropsychological function.

The researchers concluded that at 1 year after CABG, there was no significant difference in out-


http://archsurg.jamanetwork.com

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comes between off-pump and on-pump procedures.


Therapy as good as surgery for torn meniscus, osteoarthritis

Symptomatic osteoarthritis of the knee affects more than 9 million people in the US. Meniscal damage is especially prevalent in patients with osteoarthritis and is frequently treated surgically with arthroscopic partial meniscectomy. However, it is uncertain whether surgery results in better functional outcomes than nonoperative therapy in these patients.

In this government-funded, multicenter, randomized, controlled trial, researchers assessed the efficacy of arthroscopic partial meniscectomy compared with a standardized physical therapy regimen for symptomatic patients with a meniscal tear and mild-to-moderate osteoarthritis.

A total of 351 patients were randomly assigned to surgery and postoperative physical therapy, or to a standardized physical therapy regimen, with the option to crossover to surgery at the discretion of the patient and surgeon.

Though 30% of patients assigned to physical therapy underwent surgery within 6 months, those who stayed with therapy improved as much as patients undergoing surgery at 6 and 12 months, in terms of pain and function.

The researchers concluded that physical therapy was as good as surgery for treating meniscal tears and knee osteoarthritis.


Standards and regulations

Centers for Disease Control and Prevention


The data are used for the CDC’s National and State Healthcare-associated Infections Standardized Infection Ratio (SIR) report.

Among the improvements in HAIs:

• 17% reduction in surgical site infections
• 41% reduction in central line-associated bloodstream infections
• 7% reduction in catheter-associated urinary tract infections.


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Special Fraud Alert: Physician-Owned Entities. The Office of Inspector General issued a special fraud alert March 26 on physician-owned distributorships (PODs).

Among the criteria that concern the OIG about PODs or their surgeon owners are when:
• The size of investment offered to each surgeon owner varies with the volume or value of devices the surgeon uses.
• Surgeon owners pay different prices for their ownership interests because of the volume or value of devices used.
• Surgeon owners state or imply they will perform procedures or refer patients elsewhere if a hospital or ambulatory surgery center does not purchase devices from the POD, or require that the facilities enter into an exclusive purchase arrangement with the POD.

http://oig.hhs.gov/fraud/docs/alertsandbulletins/2013/POD_Special_Fraud_Alert.pdf

Joint Commission tips for preventing surgical fires

Tips for Compliance: Preventing Surgical Fires. The Joint Commission gives tips on preventing surgical fires to help health care facilities comply with its fire safety standards and associated elements of performance for accreditation.

The tips also list recommendations to reduce the risk of surgical fires from the Food and Drug Administration and ECRI Institute.

http://www.jointcommission.org/issues/article.aspx?Article=1MFspIEIDm3est42RZbChSPYHGEZBiAjf3F2w%2b7pvAE%3d

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