FEATURES

Bariatric surgery studies exemplify the ACS’ commitment to Inspiring Quality
Carlos A. Pellegrini, MD, FACS 7

From the Chair of the RAS-ACS: The best time to be a surgeon
Joshua M. V. Mammen, MD, PhD 10

When things go wrong
Joseph V. Sakran, MD, MPH; Haytham Kaafarani, MD, MPH; Nicolas J. Mouawad, MD, MRCS; and Heena P. Santry, MD 13

Stress, burnout, and maladaptive coping: Strategies for surgeon well-being
James G. Bittner IV, MD; Zarrish Khan, MD; Maya Babu, MD; and Osama Hamed, MD 17

Financial planning for residents
Sangeetha Prabhakaran, MD; Marisa Cesasco, MD; and Nicolas J. Mouawad, MD, MRCS 23

The psychosocial toll of a surgical career
Mecker G. Möller, MD; Jeff Dehmer, MD; and Haytham Kaafarani, MD, MPH 28

The future of surgery: Autonomy or employment?
Amy Liepert, MD; Maya Babu, MD, and Stefan Leichle, MD 33

Do more requirements make a better surgeon?
Theresa M. Conyac, MD 39

Do simulator training and duty hour restrictions lead to safer surgery?
Konstantinos Makris, MD 40

Who will land the plane in the Hudson?
Kevin Modeste, MB, BS 42

The era of the simulated surgeon
Wissam Raad, MD 44

Approaches to maintaining high-quality surgery training in the twenty-first century
Omar M. Rashid, MD, JD 45

It is time for a paradigm shift in surgical training regulation
Gokulakrishna Subhas, MD 47

Volume dictates outcomes
Pragatheeshwar Thirunavukarasu, MD 48

External vs. internal motivators: Against increasing requirements
Pragatheeshwar Thirunavukarasu, MD 50

On the cover: In a series of articles beginning on page 10, members of the Resident and Associate Society of the American College of Surgeons address the difficulties surgeons encounter in providing patient care while dealing with the many stresses inherent in a medical career.
FEATURES (continued)

Surgical lifestyles: The “write” stuff: An interview with columnist and author Pauline W. Chen, MD, FACS 52
Tony Peregrin

DEPARTMENTS

Looking forward
Editorial by David B. Hoyt, MD, FACS, ACS Executive Director 4

Advocacy advisor
ACS state chapter lobby day program
Charlotte Grill 57

NEWS

Dr. Berci receives the College’s Jacobson Innovation Award for 2011 59
Kamal M. F. Itani, MD, FACS

The ACS Clinical Trials Methods Course: Overview and assessment 62
Glenn T. Ault, MD, FACS; and Diana C. Breda

Did you know... 65

Leading the charge in defense of the RUC 66
Bob Jasak, Esq., and Kristen Hedstrom, MPH

Surgical education: Residents setting the example 69

2011 COT Residents Trauma Papers Competition winners announced 72

Faculty research fellowships offered for 2012–2014 73

ANZ Traveling Fellowship for 2013 announced 74

A look at The Joint Commission: Robust Process Improvement™ at The Joint Commission 75

NTDB® data points:
One hundred more or less 76
Richard J. Fantus, MD, FACS

Chapter news 78
Rhonda Peebles

The American College of Surgeons is dedicated to improving the care of the surgical patient and to safeguarding standards of care in an optimal and ethical practice environment.
Looking forward

As our reputation for Inspiring Quality grows in our nation’s capital, the American College of Surgeons will become a more influential and active partner in determining the future of health care for all Americans.

Our legacy

We explained that the ACS was founded in 1913 with the goal of raising the standards of surgical practice and thereby improving the care of surgical patients. The College’s enduring commitment to quality care is reflected in the many initiatives we have developed, including the following:

- Issuing minimum standards for hospitals in 1917 (a program that evolved into what is now known as The Joint Commission)
- Creating the Commission on Cancer (CoC) in 1922
- Forming the Committee on Trauma (COT) in 1950
- Launching the American College of Surgeons Oncology Group to conduct surgical clinical trials in cancer care in 1998
- Bringing the National Surgical Quality Improvement Program (NSQIP®), which originated in Veterans Affairs, into the private sector in 2004 and fostering its subsequent expansion and improvement
- Establishing credentialing programs, including the ACS Bariatric Surgery Center Network (BSCN) and the National Accreditation Program for Breast Centers (NAPBC)

Guiding principles

In addition, we outlined the College’s guiding principles of continuous quality improvement, which are as follows:

- Set standards: Identify and set the highest clinical standards based on previous collection of outcomes data and other scientific evidence that can be customized to each patient’s condition so that surgeons and other health care providers can offer the right care at the right time in the right setting.
- Build the right infrastructure: Surgical facilities must have in place appropriate and adequate staffing levels, a reasonable mix of specialists, and the right equipment.
- Use robust data: Base decisions on clinical data drawn from medical charts and backed by research in order to increase patient safety, prevent complications, and lower health care costs.
- Verify processes and infrastructure: Allow an external authority to periodically certify that the right systems are in place, that outcomes are being measured and benchmarked, and that hospitals and providers are proactively responding to these findings. When these four guiding principles are implemented, the infrastructure naturally forms a continuous loop of quality improvement for physicians and hospitals, which results in better care and lower costs.
During our Capitol Hill visits, we also demonstrated how the College’s quality improvement programs are adding value to the U.S. health care delivery system.

For example, we showed that hospitals that participate in ACS NSQIP have been able to substantially decrease complications and mortality. (See the upcoming September issue of the Bulletin for an article by Scott Ellner, DO, in which he describes how ACS NSQIP has benefited Saint Francis Hospital and Medical Center in Hartford, CT.)

We reported on how the COT’s trauma center and the CoC’s accreditation programs have been effective in driving quality improvements at trauma and cancer centers throughout the country.

We described how the NAPBC has led to enhanced coordination among cancer care team members and organization of resources at breast centers.

We explained how the clinical standards and requirements the ACS BSCN established have been shown to improve the quality of surgical care and long-term follow-up and outcomes for patients with morbid obesity. (For a more thorough discussion of the ACS BSCN, see page 7.)
And finally, we discussed how ACS Accredited Education Institutes help surgeons to develop new skills and receive training in the most current evidence-based procedures.

**Benefiting all Americans**

We presented solid evidence documenting how ACS quality improvement programs can be useful in the development of the value-based health care delivery system that the federal government has been striving to put into place for the past decade. The Affordable Care Act was enacted with the objectives of improving quality, constraining spending, and expanding access to care. The Secretary of the U.S. Department of Health and Human Services and the administrators of the Centers for Medicare & Medicaid Services have issued and implemented federal regulations with similar intents and purposes. In addition, we articulated how the ACS Accredited Education Institutes can contribute to the Institute of Medicine’s call for the creation of a “learning health care system.”

We believe the members of Congress and the senior congressional advisors with whom we met grasped how the College’s quality improvement programs can be used to help foster a safer, more effective health care system, while, at the same time, helping to cut costs. As our reputation for Inspiring Quality grows in our nation’s capital, the American College of Surgeons will become a more influential and active partner in determining the future of health care for all Americans.

Table 2.
**Congressional offices visited**

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<td>Max Baucus (D-MT): Chair, Finance Committee</td>
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<td>Tom Casey (D-NY)</td>
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<td>Orrin Hatch (R-UT): Ranking Member, Finance Committee</td>
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<td>Mark Kirk (R-IL): Appropriations; Banking, Housing and Urban Development; and Health, Education, Labor and Pensions (HELP) Committees</td>
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<td>Mitch McConnell (R-KY): Senate Republican Leader</td>
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<tr>
<td>Patty Murray (D-WA): Appropriations, Budget, Veterans Affairs, Rules and Administration, and HELP Committees</td>
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<td>Harry Reid (D-NV): Senate Majority Leader</td>
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<td>Mark Warner (D-VA): Budget; Commerce, Science and Transportation; Banking; Housing and Urban Affairs; Rules and Administration; and Joint Economic Committees</td>
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<th>House of Representatives</th>
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<td>John Boehner (R-OH): Speaker of the House</td>
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<td>Dave Camp (R-MI): Chair, Ways and Means Committee</td>
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<td>Eric Cantor (R-VA): Majority Leader</td>
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<td>Kevin McCarthy (R-CA): Majority Whip</td>
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<td>Pete Sessions (R-TX): Chair, National Republic Congressional Committee</td>
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<td>Pete Stark (D-CA): Ranking Minority Member Ways and Means Subcommittee on Health</td>
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<td>Fred Upton (R-MI): Chair, Energy and Commerce Committee</td>
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If you have comments or suggestions about this or other issues, please send them to Dr. Hoyt at lookingforward@facs.org.
Bariatric surgery studies exemplify the ACS’ commitment to Inspiring Quality

Two recent studies in the area of bariatric surgery clearly demonstrate how the American College of Surgeons’ (ACS) quality measurement programs are being used to determine the safety and effectiveness of certain surgical interventions. Most recently, Matthew M. Hutter, MD, MPH, FACS, and other surgeons presented the first report from the American College of Surgeons Bariatric Surgery Center Network (ACS BSCN) accreditation program at the annual meeting of the American Surgical Association.*

This report specifically examines the safety and effectiveness of laparoscopic sleeve gastrectomy (LSG) in comparison with gastric bypass and band procedures. Previously, in the March 2011 issue of the Journal of the American College of Surgeons, Prateek K. Gupta, MD, FACS, and colleagues discuss how they used the ACS National Surgical Quality Improvement Program (ACS NSQIP®) dataset to develop a risk calculator for 30-day postoperative morbidity of bariatric surgery patients.†

It is appropriate that the results of these studies are being published now, just as the ACS launches its new quality campaign, titled Inspiring Quality: Highest Standards, Better Outcomes. Indeed, these


by
Carlos A. Pellegrini, MD, FACS
reports show how clinical research and appropriate, evidence-based standards of care can be carried out with the goal of producing better outcomes, a concept that the ACS has espoused since its inception. The reports also confirm that the ACS databases are now being used effectively in these types of research projects.

**Validating safety, effectiveness**

The study conducted by Dr. Hutter and colleagues used information gathered through the ACS BSCN data collection system. The ACS BSCN was created with approval from the Board of Regents in 2005. Having experienced firsthand the positive impact on quality that the organization’s trauma and cancer center accreditation programs produced, the board determined that facilities in which bariatric surgical procedures were performed should undergo similar independent, voluntary, and rigorous peer evaluation. Reviewers are charged with verifying that bariatric surgery centers are in compliance with nationally recognized standards with regard to physical resources, human resources, and standards of practice. Processes and outcomes, an important part of the accreditation process, were originally intended to be determined through the use of ACS NSQIP.

In 2007, the Regents expanded the program by approving the creation of a Data Collection System, which would facilitate monitoring of bariatric-specific, longitudinal data on all patients undergoing weight-loss operations. It is important to note that this data collection system was created for purposes of quality assessment and quality improvement and not for research. Yet, the availability of data that measured the effect of the intervention on the patient’s weight, diabetes, hypertension, and other conditions associated with the morbidly obese state would allow, over time, data analysts to determine the efficacy of any one type of procedure on any one parameter. This move effectively advanced the process, previously centered on perioperative safety, into the field of comparative effectiveness research.

The report from Dr. Hutter’s team, presented just two days after the College launched the Inspiring Quality: Highest Standards, Better Outcomes campaign, is a landmark publication. Designed to assess the safety and effectiveness of the LSG in comparison with more established bariatric operations, it captures a novel procedure as it is being introduced into clinical practice at a time when case reports by experts and case series by advocates dominate the literature. Indeed, it is the first prospective, multi-institutional, nationwide, clinically rich study of bariatric-specific data comparing the sleeve gastrectomy to the adjustable band and open and laparoscopic gastric bypass operations.

The report by Dr. Hutter and colleagues is the first publication examining data from the ACS BSCN accreditation program and its prospective, longitudinal data collection system based on standardized definitions and collected by trained data analysts. Univariate and multivariate analyses compare 30-day, six-month, and one-year outcomes, including morbidity and mortality, readmissions and reoperations, reduction in body mass index (BMI), and other obesity-related diseases.

Using data from 109 hospitals for 28,616 patients who underwent weight-loss surgery between July 2007 and September 2010, the study showed that LSG had higher risk-adjusted morbidity, readmission, and reoperation rates than gastric band procedures, but lower reoperation rates than open and laparoscopic gastric bypass procedures. There were no differences in mortality between LSG, laparoscopic band, and laparoscopic gastric bypass procedures. The study showed that reduction in BMI and most weight-related diseases following LSG was also between those of the band and the laparoscopic gastric bypass. Indeed, LSG appears to be more effective than banding in the reduction of weight and in its effects on hyperlipidemia, diabetes, and hypertension, but falls short of the results obtained with laparoscopic gastric bypass in these areas. In short, this study shows that LSG has morbidity and effectiveness ratings in between those for gastric band and bypass operations. Ongoing national data collection and analysis will, of course, be necessary to determine long-term comparative effectiveness.

**Determining risk**

Before Dr. Gupta and his colleagues conducted their analysis of risk factors in bariatric surgery, a risk score estimating postoperative mortality for patients undergoing gastric bypass was already in place; however, a risk calculator for predicting postoperative morbidity had yet to be developed. The authors sought to fill this gap using ACS NSQIP data to study 11,023 patients with a mean BMI of 48.9. Risk factors
associated with increased risk of 30-day postoperative morbidity include recent myocardial infarction/angina, dependent functional status, stroke, bleeding disorder, hypertension, BMI, and type of bariatric surgery. Dr. Gupta's research suggests that patients with a BMI of 35 to 44 or greater than 60 had significantly higher risk than patients with a BMI of 45 to 60. These findings were used to create the risk calculator and, subsequently, validate it.

Dr. Gupta and colleagues concluded that ACS NSQIP data can be used to develop and validate a risk calculator that predicts postoperative morbidity after various bariatric procedures. The risk calculator that this group developed will likely aid in surgical decision making and requesting informed patient consent. It is anticipated that this process may provide a template that can be applied to other surgical conditions as well.

**Change for the better**

These studies demonstrate how times have changed for the better with respect to the introduction of new surgical procedures into clinical practice—and the surgical community should take credit for these changes. Compare the introduction of LSG to the initial use of laparoscopic cholecystectomy in the late 1980s. Surgeons were often introduced to laparoscopic cholecystectomy through weekend courses with no surveillance and no monitoring. Because some surgeons were performing these procedures before the profession knew how they could be performed most safely and effectively, many patients developed common bile duct injuries. More importantly, the procedure was used widely, by anyone who had decided to use it, and without a formal way to evaluate day-to-day, case-by-case its safety or its efficacy.

In contrast, the ACS BSCN provides a mechanism to create the right infrastructure in terms of resources and processes of care. Within that protected environment, the operations performed can be rigorously monitored using ACS NSQIP, which focuses on patient safety during the perioperative state, and its long-term effects and efficacy can be monitored using the data collection system. This allows the surgical community to determine, in real time and quite rapidly, which patients have risk factors that could complicate the safety and effectiveness of various procedures. And while these studies focus on bariatric operations, they provide physicians with a template for conducting similar comparative effectiveness research in the future—just as the ACS trauma and cancer center verification programs provided models for the BSCN program.

**Conclusion**

The development, study, and use of risk-adjusted clinical data to promulgate standards of care is particularly important as policymakers and the rest of society struggle with how best to ensure the future of patient safety, improved outcomes, and continued innovation in health care. These studies show that clinicians—using the College’s quality improvement programs—can provide the kind of data needed to drive sound policy.

We have reached a milestone both in the way we think about the safety in the introduction of new surgical interventions and in the way we monitor their impact. Shukri Khuri, MD, FACS, would be proud that his vision for performance monitoring in Veterans Affairs hospitals through a National Surgical Quality Improvement Program has now become a vibrant, real-world platform for safe innovation—an honor to his legacy. Likewise, the founders of the ACS, who brought forth the first Standards for Hospitals program and the College’s educational programs, would have taken pride in the continued realization of their goal of ensuring that patients receive care from appropriately trained surgeons practicing in an optimal environment. As the College launches its Inspiring Quality campaign, surgeons are well-positioned to play a powerful and influential role in determining the future of surgical patient care.

**Dr. Pellegrini** is The Henry N. Harkins Professor and Chair, Department of Surgery at the University of Washington in Seattle, and Chair of the ACS Board of Regents.
From the Chair of the RAS-ACS:

The best time to be a surgeon

by Joshua M.V. Mammen, MD, PhD
Welcome to this special issue of the Bulletin, which features contributions from the Communications Committee of the Resident and Associate Society of the American College of Surgeons (RAS-ACS). The RAS-ACS has a membership of more than 14,000 Associate Fellows, Resident Members, and Medical Student Members. Through the RAS-ACS, young surgeons and surgeons in training are able to participate in numerous ACS activities and provide their unique perspectives on a variety of important discussions and decisions.

Since October of last year, I have had the privilege to serve as the RAS-ACS Chair. The position has afforded me the unique opportunity to provide the young surgeon perspective on behalf of my colleagues within the College as we work to ensure that all perspectives are considered—in particular, the opinions and perspectives of young surgeons and surgeons in training. During my tenure, what I have found to be most inspiring is the aura of optimism regarding one of the College’s ongoing goals: to improve the quality of care provided to surgical patients. The College’s Inspiring Quality campaign expresses the ACS’ interest in advocating for the benefit of our patients. I have become firmly convinced that there is truly no better time to be a surgeon and to be a member of the ACS.

Recently, I had the opportunity to read an autobiographical account of a surgeon who lived in my home state of Kansas during the early part of the last century. In the autobiography, Arthur Hertzler, MD, calls himself the “horse and buggy doctor,” and recounts his travails during this period of relatively limited knowledge regarding the pathophysiology of most surgical conditions. He vividly describes the primitive surgical techniques that he had at his disposal. Basic expectations that modern surgeons have, such as well-lit and fully equipped operating rooms, were not available for surgeons such as Dr. Hertzler, who performed procedures in the bedrooms of his patients’ homes. The use of anesthesia to provide comfort to the patient, not to mention the basic rules of antisepsis, were not followed, nor were they understood at that time. Despite these challenges, Dr. Hertzler convincingly describes the joy that he experienced as a surgeon. In fact, surgery was the only profession that he could imagine practicing for the simple reason that he was able to intimately intervene in patients’ lives so they could survive otherwise deadly or incredibly painful conditions. For example, the enthusiasm with which he described traveling a long distance during inclement weather to lance a perirectal abscess of a suffering individual still resonates with surgeons today.

After reading an account of surgery from only a century prior, it’s clear to me that the advances in the care of our patients since that time are truly remarkable. Previously fatal conditions are easily treated with operations that do not even require an overnight stay (examples include acute appendicitis and acute cholecystitis) and barely result in a scar.

The topics for this year’s special RAS-ACS section... are an expression of the simple reality that surgeons are better able to concentrate their efforts in the care of their patients if they are not enduring undue outside pressures.

The associated morbidities with surgical intervention have decreased dramatically with the integration of minimally invasive and percutaneous techniques. Furthermore, progress in surgical science has led to multidisciplinary treatment strategies that have, in turn, led to an integrated approach that has resulted in improvements in the treatment of varied diseases.
such as breast cancer and acute traumatic injuries. Surgeons have been at the forefront of these improvements with initiatives like the ACS Commission on Cancer and Committee on Trauma. What has not changed, however, is the enthusiasm that surgeons continue to express in being able to alleviate the suffering of their fellow human beings.

While surgeons justifiably have much to be proud of, the future, at times, can seem uncertain. The impending shortage of surgeons, by more than 30 percent of what is needed to meet the needs of the public by the end of this decade, is certainly daunting. Already, emergency departments throughout the country are having difficulty obtaining surgery coverage. One recent survey of emergency room directors showed that 74 percent reported difficulty in obtaining specialist consultations, particularly from surgical specialties. In my own community, a hospital with more than 100 beds regularly transfers patients with routine surgical emergencies, such as acute appendicitis, to my institution due to a lack of adequate emergency general surgery coverage. In addition, reimbursement rates for surgical procedures have steadily been declining over time, placing additional pressures on surgeons. Finally, regulatory standards have already dramatically altered the training environment for surgeons, and threaten to further alter the autonomy that surgeons have to remain dedicated to their patients, regardless of the late hour.

In light of these pressures, we, as surgeons, need to be aware of resources to ensure that we can continue to provide quality care to our patients. To that end, in this issue, the RAS-ACS elected to concentrate on the topic of “caring for the caregivers.” The articles focus on the stresses associated with our profession, discuss coping strategies, provide resources to address financial concerns, and evaluate possible employment situations that may help physicians adapt to some of the pressures of the current health care environment.

The topics for this year’s special RAS-ACS section are not chosen to generate sympathy or bemoan the situation of surgeons, but rather are an expression of the simple reality that surgeons are better able to concentrate their efforts in the care of their patients if they are not enduring undue outside pressures. My hope is that, at least, some of the articles will resonate with readers, allowing them to develop strategies to better adapt to the challenges associated with modern surgery, so they are able to care for their patients.

After all—as a speaker recently noted during the Spring Meeting of the Commission on Cancer—“The reason we are here is for our patients.”

References

Dr. Mammen is assistant professor of surgery and associate program director, department of surgery, University of Kansas, Lawrence. He is Chair of the RAS-ACS.
In the landmark report *To Err Is Human: Building a Safer Health System*, published by the Institute of Medicine (IOM) in 1999, researchers highlighted the need for greater efforts at preventing medical errors. In the years since that report, progress has been made in the prevention of surgical errors, particularly in operating rooms, through the implementation of the surgical safety checklist. Despite these and other safety improvement efforts aimed at saving lives and reducing costs to the health care system, medical errors continue to occur. Although the IOM report states that “health professionals pay with loss of morale and frustration at not being able to provide the best care possible” when errors occur, these consequences are often ignored when mistakes happen. This article will explore the professional consequences of medical errors, and explore opportunities to alleviate the moral distress experienced by surgeons when things go wrong.

The second victim when things go wrong

All physicians are prone to feelings of anguish, worthlessness, and guilt when they have been directly or indirectly involved in a medical error. Following an unanticipated error-related outcome, the physician often becomes the second victim. Albert Wu, MD, an internist, has extensively studied the practitioner as the second victim of medical error. The symptoms he describes are not unlike post-traumatic stress disorder. Practitioners involved in medical error “feel singled out and exposed” and “the event replays itself over and over… [in the person’s]… mind.” These second victims “question… [their]…competence but fear being discovered” and “dread the prospect of potential punishment and of the patient’s anger.”

Relative lack of experience with poor patient outcomes (preventable or not), and possibly unrealistic expectations of their own ability to proactively prevent any and all harm to their patients, make physicians-in-training especially vulnerable to such moral distress. Experiences of surgical trainees relative to their peers in other specialties may be exacerbated due to the greater possibility of catastrophic outcomes in surgical cases, and the high and persistent workload precluding time to reflect upon a physician’s role in medical error. Since surgical training is, in part, a gradual buildup of self-confidence and the abolishment of insecurity in performance, an error made by a resident early in his or her career can present a serious blow to the physician’s sense of competence, and feelings of inadequacy may linger for many years to come. Medical errors may, in fact, result in decisions to pursue nonclinical careers—as was the case with Carlo Fonseka, MD, who turned to a career in physiology when he was unable to come to terms with a fatal medical error.

A surgical resident may need both time and assistance for his or her own “wound healing” following a medical error. Unfortunately, there are few resources to address and possibly alleviate the thoughts of anguish, worthlessness, and guilt associated with such an error. Even though the culture of surgery is slowly changing and moving away from that of blame toward one of systematic analysis of adverse events, mortality and morbidity conferences may still unintentionally shame those involved in a medical error. A “repentant”
resident who takes responsibility without hesitation is often expected on the podium—where words of sympathy may be scarce. A constructive department should have clear routes to help all surgeons, in particular residents and fellows, cope with their errors and ease their healing and maturation through the difficult times.

**Support when things go wrong**

Conditioning from the stressors typically experienced during the rigors of surgical training does little to prepare a surgeon for the experience of a medical error. Leaders of departments and training programs and practicing surgeons must have a paradigm for providing support to one another and to their trainees when things go wrong. Sociologist James House’s model of social support provides a framework for coping with moral distress. Mr. House has described social support as the “functional content of relationships” that can be classified into four categories: emotional, informational, instrumental, and appraisal. Each component is applicable to surgeons dealing with distress, in particular trainees whose culpability in the medical error may be entwined with that of others responsible for their training and evaluation.

Emotional support encompasses the provision of caring, trust, and empathy. In typical situations of distress, emotional support is provided by those closest to the physician—for example, an individual’s family or friends. These supporters provide comfort without judgment or condition, and as a result, there is a minimal sense of vulnerability. However, in circumstances of medical error, the factual details or a sense of shame and humiliation may prevent physicians from sharing these details with their social support network. Peers, then, become the pillars of emotional support in the workplace, as many peers may have found themselves in a similar situation. Confiding in a trusted peer about an error that has led to feelings of self-loathing or isolation can be remarkably therapeutic for the physician. Trust, reservation of passing judgment, and confidentiality are paramount to the success of this mechanism of social support.

Informational support is primarily conveyed through advice and guidance, with suggestions for improvement and coping. The insight and a personal perspective rendered by a senior colleague or supervising surgeon who have, themselves, been involved in medical error may provide coping methods that alleviate the second victim’s symptomatology. All clinicians, regardless of level of training, can benefit from a discourse on constructive ways to cope with the stress and professional ramifications of medical error. The use of tangible aids and services from established entities or organizations is instrumental to support. These aids can address both the emotional aspects and the professional consequences of medical errors. Many institutions offer employee assistance programs, whose array of services often include confidential referral to professional counseling services for employees having difficulty overcoming the psychological consequences of medical error. Dedicated resources of liability and risk management—a reality that must often be faced after a medical error—are also available. The American College of Surgeons publishes *Professional Liability/Risk Management: A Manual for Surgeons and Surgical Patient Safety: Essential Information for Surgeons in Today’s Environment.* Each individual institution’s risk management and legal departments offer services to assess the professional consequences and potential legal ramifications of medical errors. Representatives from this area provide support in an objective format without an emotional component and can greatly ease the mental anguish associated with ongoing reminders (such as root cause analysis meetings and depositions) that an error occurred. For the clinician not versed in the medicolegal processes surrounding medical error, these experts can guide the physicians toward the necessary next steps in managing the specifics of liability.

The final component of social support is appraisal support. The most individual and personalized form of support, appraisal is derived from within. Certainly, the sources of support offered by other people, entities, and resources highlighted in this article may be requisite to achieve appraisal. In particular, experienced surgeons may model appraisal support in dealing with their medical errors. However, ultimately, individuals involved in a medical error need to establish their direct role in the event, why and how it occurred, and how it can be avoided in the future through the process of self-evaluation, feedback, and criticism. Acceptance that a medical error occurred either wholly, or in part, due to a physician’s actions (or lack thereof) and the ability to continue forward professionally require honest self-reflection.

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As implied by the title of the IOM report, to err is human; despite the widespread efforts to impart process or systems-level change to minimize them, medical errors will occasionally occur despite the best efforts and intentions of the humans providing medical care. In order to prevent professional incapacity and alleviate personal grief, surgeons must not only be aware of the various forms of support available to them but also avail themselves of these resources liberally. Surgical trainees are often least likely to know what is available and how to access these resources. Thus, the burden is upon department chairs, program directors, supervising attendings, and mentors to ensure adequate information regarding medical errors and the utilization of social support when things go wrong.

Debriefing: When things go wrong

While social support is crucial for individuals coping with medical errors, formal debriefing may be of greater benefit, as this process addresses the larger group involved in the medical error. Debriefing minimizes stigma and provides pathways to move forward through a transparent process of dealing with avoidable medical error. Debriefing initially originated in the military as a method to assess an individual’s experience from a mission. In this context, debriefing would both serve as a therapeutic way to deal with traumatic events and would provide concrete experiential data to analyze in order to enhance future operations. This potentially allowed for the early return of military personnel to the front line.

One of the most widely used methods of debriefing in traumatic situations—such as circumstances of medical error—is critical incident stress debriefing (CISD). CISD is a strategy for psychological debriefing. Originally developed by Jeffrey T. Mitchell, MD, for acute stress response for emergency workers, CISD enables participants to review and share their thoughts, impressions, and reactions after a critical incident. The primary goal of this kind of debriefing is to mitigate stress and assist healers in a swift recovery after a traumatic event so they are able to continue delivering optimal care to their patients.

Various other debriefing models are available; however, each model shares several key components. The initial phase focuses on the impact of the experience. For medical errors, this would mean an assessment of how the clinicians involved perceive the event. In addition, systematic reflection and analysis of a critical incident takes place in order to clarify the facts among group members (for example, the surgeon, resident, circulating nurse, and anesthetist) regarding an error that occurred in the operating room. The second phase allows for personalization of the experience, encouraging the individuals to explore emotions that took place during the event. The final phase is tailored toward identifying the different views formed by each group member. Clinicians would use such debriefing sessions as a tool to move beyond the cause and develop a strategy based on group consensus to prevent errors of this nature in the future.

Debriefing typically occurs within the first 24 to 48 hours after a critical incident. Since individuals can have a wide range of emotional responses to such an incident, this type of early intervention is crucial. The role of a facilitator (who is not involved in the incident in question) in the debriefing process is vital.

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The facilitator might employ a range of techniques depending on the situation. He or she may act as a catalyst for the individuals involved, although a more active role may be necessary if the group dynamics are such that difficulty arises when participants attempt to share their thoughts and emotions. Regardless of how involved the facilitator is in the debriefing, it is important to note that his or her role should be that of a co-learner rather than an authoritative figure.

Different debriefing techniques may be learned through a multitude of courses, practical experience, and, more recently, through the use of simulation-based learning. Many involved in simulation-based learning consider debriefing the most important and educational aspect of the simulation. Continued research within this arena will hopefully allow for the development of evidence-based guidelines that can provide a more concrete foundation for dealing with such traumatic events.

Parting thoughts

The surgeon’s main concern—when he or she is evaluating a patient for possible surgery, during the operation, and after the procedure in the postoperative period—is the welfare of their patient and ensuring a good outcome. However, despite efforts to prevent errors, they can and will occur at a great cost to the individual patient and to the health care system. And, while it may appear callous to focus on the impact of errors on the providers, the fact is that involvement in an error can have devastating emotional and professional consequences for surgeons. Ensuring a robust surgical workforce capable of providing care using the best knowledge and practices to optimize outcomes with minimal, if any, errors needs to be incorporated into the health care environment, so that errors are not an issue of shame and retribution but one of grieving, coming to terms, and moving forward productively.

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Burnout is a clinical syndrome characterized by emotional exhaustion, depersonalization, and a decreased sense of personal accomplishment. Symptoms of burnout include physical exhaustion, poor judgment, cynicism, guilt, feelings of ineffectiveness, and a sense of disconnection with co-workers or patients. Burnout is measured using the Maslach Burnout Inventory, a high reliability tool that is generally considered to be the best-validated metric of this condition. Studies mentioned in this article employ this instrument to detect burnout among participants.

Research suggests that approximately half of practicing physicians claim medical practice is very or extremely stressful, and cite personal distress (burnout) as a significant problem.1,2 Similarly, up to 40 percent of practicing surgeons experience considerable stress and subsequent burnout during their career.3,4 However, burnout is not limited to practicing physicians and surgeons. Other vulnerable groups include residents and medical students. Approximately 50 percent of medical students in the U.S. suffer from burnout while in medical school, according to longitudinal, multi-institutional studies.5,6 Medical students may be challenged by professional and personal issues that can result in dropping out of medical school, experiencing depression, and even suicidal ideation. Increasingly, the literature describes inherent and modifiable risk factors for medical student burnout, and offers general strategies to address these factors. While these efforts are laudable, few studies investigate the professional and personal challenges faced by surgical trainees and young surgeons. In an effort to care for the caregiver, specifically surgical residents, the following article briefly summarizes the impact of stress, burnout, and maladaptive coping mechanisms on practicing physicians and surgeons, medical and surgical residents, and medical students. The article also suggests several adaptive coping strategies for improving practitioner well-being.

Practicing physicians and surgeons

The arduous and lengthy training period, high-stakes decision making, and litigious practice environment are just a few of the numerous factors that contribute to surgeon stress and burnout. Moreover, surgeons are challenged by a considerable overall workload, long hours, frequent night and weekend call, and family responsibilities. These and other stressors can have serious manifestations that may impact personal well-being, work performance, and ultimately patient safety. Surgeons—in part, because of their personality traits and work environment—are at risk for anxiety, depression, stressed or broken relationships, substance dependence, and possibly suicide as a result of these stressors.8 Yet, the clandestine culture of surgery is one of tireless self-sacrifice, self-reliance, singularity of focus, emotional permanence, and silent suffering, all of which may contribute to work-life imbalance and mask potentially onerous mental health and substance abuse problems.

In 2007, Wallace and Lemaire identified positive and negative factors associated with physician well-being through in-depth interviews with 48 faculty and six resident physicians at a single university department of medicine in a large, metropolitan area of

Stress, burnout, and maladaptive coping: Strategies for surgeon well-being

by James G. Bittner IV, MD; Zarrish Khan, MD; Maya Babu, MD; and Osama Hamed, MD

AUGUST 2011 BULLETIN OF THE AMERICAN COLLEGE OF SURGEONS
Canada. Regression analysis of survey responses of 183 physicians and residents in the same department revealed that work overload, negative patient interactions, and emotional demands were negatively related to physician well-being, with the emotional demands of work generating the most negative association. However, work hours and work-to-family conflict were not negatively related to physician well-being. In fact, regardless of the amount of work resources, physician work hours were unrelated to well-being. Co-worker and spouse support, as well as positive patient interactions, buffered work overload and emotional demands, thereby positively influencing physician well-being. To potentially alleviate unnecessary stress and strengthen support mechanisms for physicians, the authors proposed a strategy to reduce stress. They recommended the establishment of a multidisciplinary, team-based approach to patient care in a more open and supportive work environment to enhance social support and communication. The authors recommended that groups solidify functional teams by organizing team-building and social events, facilitating feedback, and working toward common goals.

Improving physician well-being is important to prevent the negative consequences associated with stress and burnout, which affect an estimated 25 percent to 75 percent of physicians. Shanafelt and colleagues queried 465 faculty physicians about burnout, professional activities, and effort dedicated to each activity. Thirty-four percent of respondents met the criteria for burnout, and most (68 percent) claimed that patient care was the most meaningful aspect of their work. Faculty physicians who spent more time on the activity that is most meaningful to them had significantly lower rates of burnout. The authors suggested optimizing career fit to promote physician satisfaction, help reduce attrition from burnout, and lessen the cost of replacing a faculty physician, which is estimated to cost $150,000 to $300,000.

Stress and burnout among practicing surgeons can have significant repercussions as well. A recent review by Balch and colleagues culled the evidence related to personal and professional consequences of stress and burnout across various surgical specialties, including general surgery, surgical oncology, transplant surgery, and otolaryngology–head and neck surgery. The authors relayed worrisome data suggesting that when surgeons fail to recognize the symptoms of burnout, serious physical, mental, and social well-being ramifications may result. If burnout is dealt with inappropriately or inadequately, surgeons risk sleep disturbances, hypertension, anxiety, alcohol-dependence, and myocardial infarction. The authors also acknowledged a higher risk of depression and suicide, particularly among younger and female practicing surgeons, respectively. Personal relationships may also suffer—the cumulative incidence of divorce after 30 years of marriage is highest among surgeons, regardless of the amount of work resources or hours worked. Furthermore, burnout and depression among practicing surgeons are independent predictors of reporting perceived medical errors, which suggests that surgeon distress may contribute to medical errors. Surgeons—with their idealistic and perfectionist nature—readily devote themselves wholly to their work. While admirable, doing so seems to increase their burnout risk.

With increasing success, researchers are defining psychosocial stressors that contribute to burnout and risk stratifying practitioners by demographics, medical specialty, and practice environment. However, an oft-overlooked obstacle to a surgeon’s well-being is occupational injury from physical stress, especially among surgeons who perform a high volume of laparoscopic procedures. Recently, Park and colleagues surveyed 317 surgeons who performed, on average, 212 laparoscopic operations annually. The authors found that 86.9 percent of respondents reported physical discomfort or symptoms attributable to performing laparoscopy. Not surprisingly, surgeon age and laparoscopic case volume positively correlated with physical symptoms. Confounding the issue is the fact that only 58.7 percent of participating surgeons reported sufficient awareness of available surgical ergonomics recommendations. Only a small majority (60 percent) of surgeons who expressed awareness of such recommendations actually applied them to their practice. The authors called for improved working conditions in the operating room, particularly for the high-volume, minimally invasive surgeon, and wider dissemination and implementation of data-driven surgical ergonomics recommendations. Moreover, the authors warned that surgical careers shortened by occupational injury from physical stress could further exacerbate the surgeon shortage in the U.S. Ultimately, stakeholders—providers, administrators,
surgical organizations, social scientists, government, and the public at large—should continue to identify the various psychosocial and physical stressors that contribute to burnout, and ought to strongly encourage the adoption of healthy coping strategies aimed at surgeon well-being.

Residents and medical students

While it is important to recognize and address burnout among attending physicians, the problem may begin much earlier. Burnout affects medical students as well as medical and surgical residents across various disciplines. A cross-sectional study conducted by Dyrbye and colleagues surveyed 2,682 medical students from seven medical schools in the U.S.17 Among respondents, burnout was prevalent (52.8 percent) and independently associated with reporting one or more unprofessional behaviors or holding a less altruistic view of physicians’ responsibility to society.17 Additionally, burnout among medical students may be associated with less empathy, as well as an increased risk of serious thoughts of dropping out of medical school.6,18 In general, a variety of personal and professional factors influence medical student well-being, but satisfaction with certain attributes of the learning environment may be critical.19

At present, a considerable number of publications confirm highly variable but concerning rates of burnout and depression in medical residents (17 percent to 76 percent and 20 percent to 37 percent) and obstetrics and gynecology residents (15 percent to 90 percent and 34 percent).20-22 According to the latest studies, medical residents suffering burnout are significantly more likely to self-report one or more suboptimal patient care practices monthly.20 Another study showed that recent internal medicine residency graduates are twice as likely to experience burnout compared with faculty physicians, with 22 percent of graduates claiming they would not pursue medicine again if given the opportunity.21

Burnout among residents can distort career decisions, impact well-being, and negatively affect patient care, but not all the news is bad. In a longitudinal, cross-sectional survey study of 134 internal medical residents from a single institution in the U.S., West and colleagues demonstrated a lack of association between resident well-being and competence in medical knowledge, as determined by standardized test scores.23 The authors surmised that the known effects of resident burnout on patient care are unlikely to be mediated by a lack of medical knowledge.23

Survey research conducted using a similar population revealed that medical residents’ assessment of faculty performance is not influenced by resident quality of life, burnout, or depression.24 So, medical residents suffering burnout do not perform worse on standardized tests or submit unwarranted negative evaluations.

Like medical residents, surgical residents are not immune to stress. However, fewer publications report rates of burnout among residents in general surgery (11.8 percent), otolaryngology-head and neck surgery (75 percent), and orthopaedic surgery (56 percent).25-27 Interestingly, surgical residents may suffer burnout less often than their medical colleagues, as described by a study conducted in the Netherlands. Prins and colleagues surveyed 2,115 medical and surgical residents (170 in general surgery, 270 in surgical specialties) and found that 21 percent of respondents met criteria for burnout and only 27 percent were highly engaged with their work.25 Subgroup analysis revealed a lower rate of burnout among residents in general surgery (11.8 percent) compared with surgical specialties (24.3 percent). Interestingly, general surgery residents represented the discipline with the lowest number of individuals suffering burnout and the highest degree of engagement, vigor, dedication, and absorption compared with other disciplines.25 Due to differences in practice environments and duty-hour restrictions between the Netherlands and the U.S., these results should be extrapolated cautiously. Regardless, the problem is all too common. As such, adaptive coping strategies are necessary to prevent untoward consequences.

Coping strategies

Unfortunately, coping strategies employed by surgeons are often not the most beneficial for dealing with stress and maintaining a sound work-life balance. Social scientists have suggested several theories as to why physicians demonstrate difficulty in dealing with these stressors in a healthy manner. Research demonstrates that physicians are reluctant to seek help from others, employ denial and avoidance as coping strategies, and disregard signs and symptoms of burnout. Physicians frequently ignore their own health, delay their own medical treatment, and avoid problems that may negatively impact their ability to care for patients.28 Instead, physicians often adhere to the
unspoken values and norms of their specialty culture, thereby consciously or subconsciously accepting the perceived stigma they associate with seeking help.29

The most frequent coping strategies are active coping, planning, restraint, and acceptance. The least frequently employed strategies include religion, denial, substance abuse, and humor.29 Until recently, little research addressed exactly which coping strategies might help prevent surgeon burnout and improve well-being. A study by Lemaire and Wallace explored the prevalence and consequences of burnout among 1,178 physicians and surgeons within a large health region in western Canada.29 For surgeons in the group, the three most commonly employed coping strategies to combat workplace stress—keeping stress aside quiet time, exercising, and spending time with family. These coping strategies to contest workplace stress negatively correlated with feeling emotionally exhausted.29

A general strategy to contest workplace stress and promote personal well-being appears in Table 1 on this page.30 For surgical residents and health care providers, the opportunities to achieve personal and professional well-being are many, but so are the significant risks of unmanaged stress and burnout,

Table 1.
Strategies for surgeon well-being30

<table>
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<th>Strategy</th>
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<tbody>
<tr>
<td>Identify personal and professional values and priorities</td>
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<tr>
<td>Reflect on personal values and priorities</td>
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<tr>
<td>Strive to achieve work-life balance</td>
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<tr>
<td>Rank personal and professional values and priorities in order of importance</td>
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<tr>
<td>Identify areas where personal and professional goals may be incompatible</td>
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<tr>
<td>Determine how personal and professional conflicts should be managed</td>
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<tr>
<td>Enhance areas of work that are personally meaningful</td>
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<tr>
<td>Reflect on areas of work that are most meaningful (PEAR)</td>
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<tr>
<td>—Patient care</td>
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<td>—Education</td>
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<td>—Administration</td>
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<td>—Research</td>
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<tr>
<td>Reshape practice to increase focus in areas of personal meaning</td>
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<tr>
<td>Decide on the value of further training for stress reduction</td>
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<tr>
<td>Reflect with colleagues about stressful and rewarding aspects of practice</td>
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<tr>
<td>Reassess areas of work that are personally meaningful</td>
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Table 2.
Individual strategies for adaptive coping

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<tr>
<td>Recognize stress and emotional burnout and adopt adaptive coping strategies</td>
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<tr>
<td>Cultivate and maintain healthy personal relationships and spiritual practices</td>
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<tr>
<td>Seek medical and/or mental health care when needed or directed</td>
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<tr>
<td>Maintain appropriate nutrition and physical fitness</td>
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<td>Strive to establish and sustain work-life balance</td>
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Organizational strategies for adaptive coping

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<th>Strategy</th>
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<tbody>
<tr>
<td>Enhance the management style of organizational leadership to recognize surgical residents at risk</td>
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<tr>
<td>Create a safe learning environment</td>
</tr>
<tr>
<td>Provide and mandate stress management training</td>
</tr>
<tr>
<td>Raise awareness of confidential counseling services</td>
</tr>
<tr>
<td>Create relationship-building opportunities for residents, spouses, and families</td>
</tr>
<tr>
<td>Address the critical contributors to burnout among female residents and dual-physician relationships (through improved flexibility of child care in the workplace and adjusted timelines for promotion)</td>
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<tr>
<td>Support resident research and continuing education activities</td>
</tr>
<tr>
<td>Establish mutually beneficial mentorships between residents and faculty</td>
</tr>
<tr>
<td>Optimize residents’ perceived value to the organization</td>
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which impact females and males differently. Based on current research, the coping strategies that appear in Table 2, on page 20, if used by individuals and organizations and encouraged or included as components of surgical residency training, can help identify and manage surgeon stress and burnout.

Summary
Practicing physicians and surgeons, medical and surgical residents, and medical students dedicate their lives to providing optimum patient care, but doing so places them at significant risk for personal and professional stress and, ultimately, burnout. Of great concern is the fact that unrecognized stress and unmanaged burnout are more prevalent among residents than previously believed. Research shows that stress without conflict resolution may lead to burnout, which can contribute to impaired technical performance, medical errors, physical and mental health problems, and even increase the risk of suicide. Therefore, it is crucial that surgeons, and the organizations that train and employ them, recognize the early signs of stress and burnout, adopt adaptive coping strategies, and maintain a culture wherein work-life balance and surgeon well-being are shared goals.

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Financial planning for residents

by Sangeetha Prabhakaran, MD;
Marisa Cevasco, MD; and Nicolas J. Mouawad, MD, MRCS

Resident physicians are especially vulnerable to financial problems because of their large educational debt and low income. Reports show that although this group is highly educated, many residents practice poor financial management.¹

The authors of an article examining the personal financial management activities of urology residents compared residents with the general population in the same age and income categories. The median debt/household income ratio was 2.38 versus 0.64, and the median resident income was $38,400. This study, published in the journal *Urology*, revealed the following:¹

- Residents had greater educational and non-educational debt and lower savings
- Only 59 percent of residents budgeted for expenses
- 27 percent had cash balances below $1,000
- 51 percent had paid interest charges on credit cards within the previous year
- 12 percent maintained unpaid credit card balances greater than $10,000

This article provides an overview of financial planning for residents, including information on debt management, understanding taxes, home ownership, procuring insurance, and setting short-term and long-term financial goals.

Financial planning and debt management

The financial cycle is a dynamic process that varies with marital status, health status, employment status, as well as age and economic outlook, and is based on four basic tiers:²

**Tier 1: Risk management and protection.** This tier is the fundamental part of financial planning, and is marked by the user taking precautions to expect the unexpected and setting up emergency funds. Practically speaking, this tier is about procuring insurance that covers health, disability, home, auto, property, and life.

**Tier 2: Saving and capital accumulation.** Tier 2 includes information related to personal savings and defining near- and long-term goals. This tier also includes purchasing a car, getting a home mortgage, using funds for education, and starting to save for retirement.

**Tier 3: Wealth accumulation.** Tier 3 takes place over a lifetime, starting with funds generated from a savings account. Retirement funds will amass at a certain point, and investment strategies in securities and stock should be well-planned in order to secure a comfortable level of wealth accumulation.

**Tier 4: Wealth distribution.** The pinnacle tier, this level is marked by zero or near-zero debt and the availability of funds for aggressive investments in speculative portfolios.

These tiers form a pyramid, with the base depending entirely on Tier 1. A strong fundamental structure is necessary for the success of a resident’s financial future.

Debt refers to anything that is owed. Buying a home or financing an education is considered “acceptable debt.” Debt to be avoided includes “consumer debt,” which refers to ongoing purchasing and use of major credit cards. Many residents graduate with several thousand dollars of debt to
credit card companies. Alleviating as much consumer debt as possible is important, since credit card debt carries very high interest rates. Other financial planning advice of note: using credit cards with no annual fee and lower interest rates is preferred; pay the balance in full at the end of every month to avoid the expensive interest charges; and, whenever possible, use cash or debit cards.

The Association of American Medical Colleges’ website offers several loan repayment resources to help residents manage their educational loans more effectively. A database of loan repayment/forgiveness programs is also listed on the site, which provides information about many state and federal programs available to medical and other health professions students.

Understanding taxes
Most deductions from a resident’s base salary go toward federal taxes. Federal income tax is likely the largest deduction from a resident’s paycheck, and is dependent on his or her tax bracket. The U.S. uses a marginal tax rate system, meaning an individual’s tax bracket is the rate he or she pays on the “last dollar” they earn. For a first-year resident filing singly, his or her federal income tax bracket is typically 25 percent.

Social Security and Medicare taxes are taxes that are typically withheld from a resident’s paycheck. In 2011, Social Security taxes were 4.2 percent of the first $106,800 of an individual’s taxable earnings, and earmarked for the Social Security trust fund. (This has been reduced from the 2010 tax rate of 6.2 percent.) A resident pays no Social Security taxes on any salary above $106,800. Medicare taxes are 1.45 percent of an individual’s earnings, and are allocated toward the Medicare program. In states that charge state income taxes, these are calculated after an individual’s federal income tax is paid, and may range upward of 8 percent for higher tax brackets. Some states have no state income taxes; these states typically have higher sales tax or excise tax to generate revenue.

Other deductions from a resident’s paycheck may include health, dental, or life insurance; any contributions to a 401(k), investment retirement accounts (IRA); and savings to a health savings account (HSA). Insurance premiums and contributions made to a HSA are typically deducted before tax. Contributions made to a 401(k) may be made before or after tax, depending on whether an individual has chosen a traditional or Roth 401(k) retirement plan.

Important things to keep in mind when thinking about taxes include the following:

• Contributing the maximum amount to a 401(k) retirement plan as allowed by an individual’s monthly budget is a good way to reduce taxable income while saving for retirement. $16,500 was the limit for 2010 and remains the same for 2011. Make contributions as early in the year as possible to benefit from compound interest. Traditional IRA contributions are made pre-tax to an investment vehicle of an individual’s choice as offered through his or her employer. Contributions may be made to stocks, bonds, index funds, money markets, or other investment funds. Taxes are deferred until the funds are withdrawn.

• The Roth 401(k) allows for contributions that are collected and treated as after-tax dollars. Income tax is paid in the year an individual contributes to the Roth 401(k), and the investor doesn’t have to pay taxes on investments when he or she withdraws funds. This may be a good idea for residents who are likely to pay a higher income tax in the future.

• Adjust withholdings if the marital status or number of dependents changes, or if the individual is in a different tax bracket than the previous year. For residents in research years who are supplementing their salary by moonlighting, this is particularly important to avoid year-end penalties or owing additional taxes at the end of the year.

• In terms of deductions, all professional licensing fees (including medical license fee and Drug Enforcement Administration registration fee) can be deducted from a resident’s federal income taxes. Home mortgage payments and property taxes may also be deducted. State automobile tax can be a deduction from an individual’s federal taxes. Child tax credits also help reduce the amount an individual pays in tax. The credit is up to $600 for each child under the age of 17. Student loan interest payments and charitable contributions are also considered deductible. (For a complete list of deductions, refer to the Internal Revenue Service website: http://www.irs.gov/taxtopics/tc500.html.)

• HSAs are an additional way to save pre-tax income and allocate it for anticipated medical ex-
penses, such as eyeglasses or dental care not covered under health plans. The maximum contribution to a HSA for 2010 was $3,050 for single coverage. However, if an individual doesn’t use his or her annual HSA contribution (typically by December 31 of that year), they forfeit that contribution.

To buy or not to buy: That is the question

Several factors determine whether buying a home is ultimately a wealth-building strategy, including the appreciation rate over time and how long an individual plans to stay in the home. The amount of the down payment and the type of mortgage used to finance the purchase are also important when making this decision.

Appreciation is the increase in value of a home over time. Historically, the national appreciation rate has averaged close to 3.5 percent, but rates vary from year to year. The leading measures of the U.S. residential real estate value are the Case-Shiller Home Price Indices and the Federal Housing Finance Agency House Price Index. These track both national and regional housing market trends.

A common rule of thumb for purchasing a home is that an individual should buy a home only if he or she is planning to own it for longer than four to five years, since the costs of buying and selling are high. One possible exception to this rule is if an individual purchases a home in an area experiencing rapid growth.

Traditionally, home ownership has offered returns greater than or equal to the cost of inflation. Benefits of home ownership include the fact that home mortgage interest and property taxes are tax deductible. Home equity loans may also be an attractive option available only to home owners.

Disadvantages associated with owning a home include the responsibility for maintaining the home, which may be costly and unpredictable; and resulting time constraints may add unwanted stress to the busy surgical resident. Upfront costs, including closing costs and down payment, can also be a challenge to owning a home, and additional fees such as property taxes and home insurance may total hundreds of dollars, or more, per month.

Renting has advantages that include the known fixed cost for the term of the lease and the knowledge that all repairs are taken care of by the landlord. Rents are often lower than mortgages for an equivalent-sized property, even when considering the tax benefits of mortgage payments. Finally, when a lease is up, the individual is free to move.

The decision whether to buy a home or to rent is an important one, and is dependent on various economic and personal factors. For surgical residents faced with five or more years in residency, some aspects of home ownership may be attractive. Some residents come to residency with no debt and substantial savings, or have a partner or spouse with a full-time job and savings of their own. This may allow for a significant down payment, thereby making a monthly mortgage payment more affordable. For others with high-interest loans or debt, those planning on relocating after residency or residents for whom the idea of maintaining and repairing a home is unappealing, renting may be the better option.

Obtaining insurance

Procuring essential types of insurance, namely, life, disability, and health insurance, is something that all residents should carefully consider.

Many types of life insurance exist; all of them pay cash to dependents after death, allowing loved ones to be financially secure. The death benefit proceeds are almost never subject to federal income taxes.

Insurance is especially recommended for people with dependents. Single individuals may not have a pressing need for life insurance, but exceptions include financial support for aged parents or siblings or for significant debt, so that it would not become a burden on loved ones. The amount of insurance available varies with each individual’s circumstances and financial goals. Generally, the amount of insurance required is the difference between current and future financial obligations, taking into account spouse’s earnings, investments, and insurance already owned.

Various types of life insurance are available. Term insurance provides protection for a specific period of time or “term.” Term insurance can vary from one to 30 years, although most policies cover periods of 20 years or so. Typically, term insurance offers the greatest coverage for the lowest initial premiums and is a good choice to those with a tight budget. Permanent insurance offers life-long protection, with the accumulation of cash value on a tax-deferred basis. There are four categories of permanent insurance: whole life, variable life, universal life, and variable universal life. With variable return, there is the option of

AUGUST 2011 BULLETIN OF THE AMERICAN COLLEGE OF SURGEONS
seeking better returns by allocating fixed premiums among investment sub-accounts like stocks, bonds, and so on. Insurance is obtainable in various ways—through tax professionals, at work, and through direct purchase. Tax professionals facilitate the detailed financial assessment needed and the amount and type of insurance to obtain. Insurance obtained at work—especially as part of a benefits package, also called “group insurance”—is not typically enough for many people’s needs. Additional insurance can be procured through the employer’s group plan.

An individual’s most important asset is not related to their possessions, but rather to his or her ability to earn a living. Most future plans depend on the individual’s ability to earn a paycheck. Disability insurance provides an income to an individual and their family if he or she is unable to work due to illness or injury. A 25-year-old worker who makes $50,000 a year and suffers a permanent disability could lose $3.8 million in future earnings. A medical professional who has the ability to earn much more surely needs insurance protection to protect his or her paycheck. Nearly one in three women and one in four men can expect to suffer a disability that keeps them out of work for 90 days or longer at some point during their working years. According to the International Center for Disability Information, the total number of people receiving Social Security Disability Insurance in 2001 was 6,208,847, with 54 percent of those being men.

Several sources of disability income protection exist. All states require employers to provide Worker’s Compensation coverage. This coverage pays about two-thirds of pre-disability income, but only in cases where illness or injury is related to work. However, most causes of disability are not related to work.

- Some states (California, Hawaii, New Jersey, New York, Rhode Island, and Puerto Rico) provide short-term disability coverage—typically for up to six months—that workers pay for through a payroll deduction.
- Social Security is administered by the federal government and covers most workers; however, qualifying for benefits is not a sure thing and payment levels can be modest. Social security pays only for total disability, and no benefits are paid for partial or short-term disability.
- Employer-sponsored coverage is the main source of disability income protection in the U.S. Plans include short-term disability (STD), which, in most cases, replaces a significant percentage of income for about three months, and long-term disability, which typically pays 40 percent to 60 percent of base salary (pre-tax) for longer periods. Disability coverage at the worksite is generally easier to qualify for than coverage purchased by an individual on their own.

The advantage of individual disability insurance is “portability” meaning there is no loss of coverage on changing jobs. Most individual plans will pay between 40 percent to 65 percent of pre-disability gross salary. When paid with after-tax dollars, benefits are received income-tax free.

**Health insurance**

Five major types of health insurance plans exist, namely indemnity plans, health maintenance organizations (HMOs), preferred provider organizations (PPOs), and point-of-service plans (POS) that combine features of both indemnity plans and HMOs, but are generally considered managed care plans. An HSA combines a high-deductible health plan (HMO, PPO or indemnity) with a tax-advantaged savings account. Most residents get coverage through their employer. Since employers typically negotiate group rates and pay a portion of the premiums, this is usually the most affordable way to get coverage. Individual coverage can also be obtained, but this requires careful comparison shopping and taking into account covered medical services, as well as the cost of deductibles, co-insurance, and copayments.

**Financial planning**

Financial planning includes short-term and long-term goals and starts with having a solid savings account. Savings should be started as early as possible in residency. Making a budget is essential. The first step is to start with monthly income and review monthly expenses, including credit card statements, utility bills, cash expenses, mortgage, insurance, and other payments. This review gives the individual a good idea of his or her own spending behavior.

Checking one’s credit report periodically is essential for strong financial planning. The FICO scores range from 300 to 800, and the higher the scores
the individual has, the better. These scores quantify creditworthiness and are a major determinant of qualifications for obtaining loans; and they influence insurance premiums, mortgage, and credit card interest rates.

Saving for retirement should start as soon as possible. Contributing to retirement plans also decreases the tax burden. The investment vehicle of choice for most retirement account programs is the mutual fund. A mutual fund invests in a variety of stocks, bonds, or both, and allows investor diversification. Distributions from a tax-deferred retirement plan, such as a 401(k) plan, are taxed as ordinary income and may be subject to an additional 10 percent federal tax penalty if withdrawn prior to age 59-and-a-half. Contributions to a 401(k) plan actually reduce taxable income.

Residents, as a group, are vulnerable to poor financial planning. Residents should strive to improve financial literacy by using available resources, as well as consulting with a financial planner to determine the best strategy to meet financial goals. Medical schools and residency programs should increase financial awareness among residents and facilitate their understanding of basic financial planning.

References

The memory of that first day a resident walks into the ward of his or her training hospital may still be fresh for some, or it may be a distant memory for others. However, most surgical residents enter their training hospital with the perception that his or her chosen surgical career will bring tremendous personal satisfaction through an unparalleled sense of achievement and professional growth. He or she are to become healers of the sick and teachers of medical students and trainees, all while harmoniously combining technical skills and sharp decision making with academia. Those rewarding experiences would contribute to a very promising and prestigious career.

Nonetheless, a career in surgery carries with it serious challenges to the surgeons and their families. Surgical training is rigorous, both emotionally and physically. The general expectation of a surgical trainee remains, to a large extent, one of complete dedication to work, a submissive nature to last-minute changes in plans and schedules, and an altruistic response to patients’ needs and demands.

Surgery residents are instilled, from the beginning, with the perspective that good residents are “warriors.” They fear being the “wimp” or “lazy” resident who called in sick, letting others pick up his or her work. Residents then carry those warrior traits into their lives as young, independent surgeons and do not self-apply the orders they give to their patients. Sadly, residents can probably recall at least one resident who came back to duty call soon after a close family member has died, or who kept working while worrying about a sick child or spouse in the hospital. Residents put their patients’ interests and welfare first, without allowing themselves the time to grieve or regenerate the mind and the body. Unfortunately, there is always a toll for the warriors to pay.

### Balancing surgery and family

In addition to the psychological burden carried on the shoulders of the surgical trainee, a similar toll is typically endured by the spouse and the children of the resident. Such a burden adds an additional layer of stress for the surgical trainee and contributes tremendously to the burnout of surgeons and their choices of future careers.1 In a survey of the spouses of academic surgeons, many reported the failure of the surgeon to participate in the daily household and child-care activities as a major contributing factor to the spouse’s dissatisfaction (N=379).2 Overall, more than one-third of surgeons report not having achieved desirable work-family or work-life balance.3

When a resident is faced with tragic personal and family events such as those involving the sickness of a child or the death of a loved one, the work-family balance takes on a whole new dimension. Life-changing events such as the birth of a child or a divorce may have serious repercussions in the psyche, and may challenge the coping mechanisms of the individual involved in these kinds of situations. In a recent survey conducted at Sloan-Kettering Cancer Center that evaluated stress and the well-being of surgeons, it was found that the majority of surgeons (85 percent) do not take the leave to which they are entitled—even when they are emotionally exhausted—and 32 percent believe there is a need to address personal distress and the “culture of bravado.”4
The psychological effect of residents who do not take the time to grieve the passing of a loved one, or to come to terms with their emotions—especially while working in a fast-paced work environment with never-ending clinical duties—can be potentially devastating.

Who cares for the caregiver?

Some residents and surgeons are also caregivers, not only to children, but to aging parents or sick spouses. Rarely do trainees or young surgeons feel encouraged to discuss such issues with their superiors or to ask for support, for fear of being considered “the weakest link.” Many social norms and traditions dictate that women are the default caregivers for the family, although in contemporary society the responsibility is often shared by both parents. However, childbirth is still a “woman’s duty,” and women residents and young surgeons face a particular challenge in this area. A survey among surgeons in California showed that women surgeons were less likely to be married as compared with their male counterparts (75.6 percent versus 91.7 percent, P < .001, N=895). Young male surgeons and women surgeons were less likely to have children, and women had their first child later in life (62.4 percent versus 32.0 percent, P < .001). Women surgeons were considered the primary caretaker of children in 73.1 percent of the households included in the survey, versus male surgeons in only 28.6 percent of the households (P < .001). Interestingly, more women surgeons than men surgeons thought that maternity leave was important (67.8 percent versus 30.8 percent, P < .001). The guilt and frustration experienced by surgeons who are also mothers can be devastating for those not able to spend time with their babies or to attend to their sick children properly.

Surgery is arguably different than other careers, because it demands that one adjust to the unpredictability of needing to leave the “nest” in the middle of the night or arriving home at late hours. Many women surgeons, unfortunately, delay motherhood and make work their priority, even though fertility drastically declines after 35 years of age, occasionally necessitating the assistance of reproductive medicine. The expenses and the emotional rollercoaster of such a situation should not be underestimated.

Surgeon burnout: Where are we today?

Residents have all felt the overwhelming emotional weight of patient care responsibilities added to the personal stress brought on by the lack of sleep, debt, and mental and physical exhaustion. In fact, overcommitted residents have been shown to have higher risks of sleeping problems and of neglecting their social contacts.

The negative effects of a demanding career, such as surgery, have been brought loosely together under the term “burnout.” Burnout is described as a “syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who work with people in some capacity.” Others have termed it a “pathologic reaction in response to long-term work stress.” Burnout is difficult to talk about, particularly among surgeons, where the drive toward excellence is constant and pervasive.

It appears that, overall, health care professionals are becoming increasingly dissatisfied with their professional lives. Surgeons are even more sensitive to this phenomenon since their careers typically involve longer hours and more stress than many other careers. A notable survey revealed that 42 percent of surgical oncologists reported burnout and 27 percent were dealing with psychiatric levels of stress (N=72). Sleep medications (13 percent) and alcohol (30 percent) were occasionally (and unfortunately) reported as coping mechanisms.

Another survey of members of the American College of Surgeons (ACS) in 2009 demonstrated that respondents had a 32 percent rate of high emotional exhaustion, a 26 percent rate of high depersonalization, and a 13 percent rate of low sense of personal accomplishment (N=7,905). Furthermore, in the same study, 30 percent of respondents screened positive for depression and 10 to 15 percent met criteria for major depressive disorder after a formal psychiatric evaluation.

The number of factors that can play into the sensation of burnout are myriad and certainly vary. Difficulty in maintaining a good balance between work and home is a definite contributing factor. Work-related factors can also contribute to burnout. Among surgical residents in Switzerland, the strongest predictors of moderate burnout were “poor interaction with nurses” and “disturbances due to telephone consultations.” A high overall workload was associated with a high level of burnout. Another survey of ear nose and throat (ENT) residents found that the most significant stressors were insufficient exercise and a lack of extracurricular time, difficulty eating healthily, low salary, and lack of sleep (N=684). According to this survey, the incidence of high and moderate burnout was 86 percent.
Residents barely have a chance to catch their collective breath, much less sit down and contemplate the significance of the work they do every day. Residents do spend a large portion of their youth learning how to be surgeons, and they are exposed to dramatic displays of loss, life, and death. Imagining that they are immune from the psychological toll of such type of work is simply unrealistic.

Chronic levels of stress can affect surgical performance, the quality of family relationships, and the nature of the doctor-patient relationship. Furthermore, a litany of problems is associated with burnout, including physical illness, emotional problems, absenteeism, poor job performance, drug abuse, and negative social attitudes. Resident burnout can also affect patient care. In a survey of ACS members, higher levels of resident burnout were associated with a higher rate of reporting medical errors (N=7,905). Compared with the general population, surgeons appear even more likely to have suicidal ideation. This finding was clearly and independently linked to burnout and depression.

Health-related issues and a higher risk of (psycho)somatic symptoms have been linked to high stress levels related to factors ranging from dealing with difficult patients to thinking about duty performance. A post-training survey by the University of Wisconsin showed that major health issues occurred in 50 percent of survey respondents by the age of 50, with substance/alcohol dependency rates of 8 percent, and many have struggled to balance a healthy lifestyle outside surgical practice. Research suggests that the average individual has an emotional support system of 17 persons. Medical students have a support network composed of 8 to 10 individuals, and junior surgical residents have a support system consisting of one individual, and for 25 percent of junior residents that support is non-human, such as a pet. Senior residents regain a support system of four to five people, and this number remains constant if an academic path has been selected.

Despite a clear association between feeling burned out and an extensive list of downstream effects, burnout remains an unspoken topic for many surgeons.

**Duty hour regulations**

Duty hour restrictions were initially instituted in an effort to increase patient safety, but it is also likely that reduced hours would have beneficial effects on residents’ well-being. The data, however, remains inconclusive. In 2004, a group in California demonstrated that there was no change in levels of emotional exhaustion, depersonalization, and sense of personal accomplishment among surgical residents before and after the institution of duty hour restrictions. This research is in contrast to the aforementioned study of ENT residents, which suggested a direct correlation between emotional exhaustion and number of hours worked. Despite the various research findings related to duty hour restrictions, it is clear that burnout is not simply a result of time spent at work.

One potential manifestation of burnout is attrition. Approximately 20 percent of categorical general surgery residents will not complete their training. Despite the institution of hours that would increase time outside the hospital or medical facility, surgical resident voluntary attrition rates have increased, and the primary reasons associated with attrition have been related to lifestyle considerations and work hours, as well as to personal and family issues. Unfortunately, the loss of residents from general surgery programs appears to be higher than in other medical and surgical subspecialties. Additionally, most attrition occurs early in training and may be due to a disparity between medical student expectations and the reality of the position. Particularly low levels of satisfaction in postgraduate years 2 and 3 indicates that this time may be a good target for intervention.

Progressing forward, it is imperative that we continue to attract the best and the brightest medical students to surgery—and keep them there. The perceived negative impact of a surgical career has trickled down to prospective trainees, as lifestyle appears to be a significant factor in steering medical students away from surgery. Interestingly, the institution of duty hour restrictions has had no effect on medical student interest in surgery early in their careers. Early interest in the pre-clinical years is predictive of the pursuit of surgical residency. Some of these shifts in attitude have been attributed to a generational effect, but there is some degree of underlying truth in stating that a career in surgery is simply more demanding.

**Resources**

Residents must learn to be humble and to accept that they are fallible humans. Asking for help from colleagues or superiors does not make a resident a less committed or successful surgeon. In fact, many
Trainees and young surgeons may not be aware of the resources available to them. A majority of residents (86 percent) tend to identify their program director as a possible resource.24 However, 67 percent would first ask for help from their resident colleagues and, lastly, from an external psychiatrist or psychologist.25 Positive mentorship from experienced faculty and senior residents should play an important role in the medical trainee's experiences, and the program director should easily facilitate strong mentoring relationships.26

Most medical institutions have confidential employee assistance programs to help residents through difficult personal times, and these programs should be made available to the residents early in their training.

Data suggesting organizational interventions, such as endorsing fitness and nutritional programs, commitment to wellness, cultural support groups, resources for stress management, financial counseling, and altering organizational culture for coverage of holidays and personal travel, have a positive effect in preventing burnout.26

Organizing resident retreats throughout the year and encouraging social and sports activities outside the training wards contribute to enhancing collegial relationships, and are a way to relieve the pressures of daily surgical responsibilities. Some programs have become creative in arranging movie or recreational time after American Board of Surgery In-Training Examination exams for their residents, or even at other times throughout the year. In addition, expressing a compassionate attitude and reaching out to younger colleagues who are having a difficult time shouldn't be underestimated as a viable way to curb resident burnout.

Conclusion

There is ample data to suggest that burnout is a common occurrence among surgical residents and attendings alike. Burnout can lead to dysfunctional relationships with fellow surgeons, patients, and their families. Furthermore, burnout can lead individuals to leave the surgical profession for other medical fields or even other careers altogether. Special attention should be devoted to the early recognition of burnout, and cultivation of strategies to combat it. Strategies such as promoting emotional self-awareness, connecting with colleagues, providing adequate support systems, and a continued belief in the importance of, and satisfaction from, residents' work will help them strengthen their resolve now and in the future as surgeons.1 Despite its challenges, a surgical career offers a chance to impact others in a way that few careers or professions can. That amazing opportunity will always be associated with some cost to the resident or medical trainee. However, recognition of this tradeoff and the institution of better efforts to provide support mechanisms for surgeons can keep the surgical workforce strong in the future.

Balancing work and family time is, therefore, essential for the well-being and sustainable performance of a surgeon and the effectiveness of surgical training. Work-life balance does not necessarily mean equal time for either work or personal life. Surgeons need to train themselves to recognize early signs of burnout, cultivate habits for personal renewal, find ways to dedicate protected time to loved ones, and invest in building strong social support systems.1 Running away from personal tragedies and avoiding family commitment by seeking refuge in Kenya and Ethiopia—as did the otherwise clinically amazing surgeon, the fictional character Thomas Stone, in the famous and insightful novel by Abraham Verghese, Cutting for Stone—is no longer an option in this day and age.27 Over the long term, it is a far healthier option for surgeons to face the challenges associated with family and personal life, and to seek a balance between career and personal life. [4]

References


THE FUTURE OF SURGERY:

Autonomy or employment?

by
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American society faces an uncertain financial future as it struggles to generate acceptable definitions for health care at a time of skyrocketing costs and mounting national debt. Defining costs can be difficult for common goods and services, but it is even more challenging to define physician reimbursement. Medicine is not just another industry—it is a profession that includes intangible services such as bedside manner, surgical judgment, and vigilance toward patient care. It also demands physicians in general, and surgeons specifically, to dedicate large portions of their lives to advanced training.

Medicine has been defined by the profession’s dedication to the patient and to medical and scientific advancement. In attempting to control costs, the direct employment of physicians has become more common. This situation may be a byproduct of the 80-hour workweek and/or due to a new generation of physicians with greater focus on work-life balance. While these factors may have some influence on physician employment, there are other factors that contribute to the newer employment models, including the increasing complexity of reimbursement, high malpractice insurance costs, increasing power of insurance companies, and increasing government bureaucracy.

Will the private practitioner become something of only historical interest? If so, patient care may be at risk, as will some of the defining characteristics of the professionalism of surgeons. Patients may be more likely to see whichever surgeon is available instead of the surgeon with whom they have developed a relationship. On the other hand, employment models may allow for ease of outcomes tracking or other quality parameters. In addition, models of physician employment may offer improved benefits to the physician, such as guaranteed income, pooled malpractice coverage, and a better lifestyle due to shared call schedules. Yet, in these types of models the physician becomes one piece within a corporation, and the corporation may have objectives divergent from those of the treating physician. History and worldwide experience can lend some insight to this dilemma.

A brief history of surgery

Surgical procedures have been described dating back to 5000 BC, and surgeons were well known in the ancient world from Egypt and Greece to Persia and India. During early medieval times, knowledgeable monks acted as healers and routinely performed surgical procedures such as abscess drainage and bloodletting. However, in the thirteenth century, the Catholic church prohibited procedures that involved contact with blood or bodily fluids. Surgical procedures became services offered by barbers, as they were considered the most skilled in the use of knives and other sharp instruments. They became known as “barber surgeons.” The introduction of formal education in medicine, science, and the arts at universities led to the creation of the medical profession, yet the separation between medicine and surgery lasted for centuries.

Barber surgeons were not considered practitioners of medicine and were explicitly not permitted to call themselves physicians. The daily life of a barber surgeon was marked by low socioeconomic status and fear of litigation (“if a doctor has treated a man with a metal knife […] and has caused the man to die […] his hands shall be cut off,” according to the Code of Hammurabi), often leading to a life traveling from place to place.

Ambroise Paré (1510–1590) was a French military surgeon and a prolific barber surgeon. He performed vessel ligations on the battlefield, treated gunshot wounds, and first described contre-coup injuries. During his lifetime, the foundation of the Guild of Barbers and Surgeons of London was formed, which required members to specialize as either barbers or surgeons. Subsequently, a more formalized training of surgeons was introduced. The guild disbanded in 1745, and surgeons emerged separately, organizing as the Royal College of Surgeons in 1800. In the U.S., the American College of Surgeons was founded in 1913. As the medical and surgical professions matured, financial models for physician reimbursement began to develop.

Medical insurance and the government

Government-sponsored health insurance programs date to nineteenth-century Europe. Initially introduced to compensate for lost wages due to illness, they set the basic framework for the comprehensive insurance
coverage found in several European countries today. Prior to 1920, many individuals in the U.S. had low medical expenditures, only paying for services and medicines they could afford.

A 1918 Bureau of Labor Statistics survey of 211 families living in Columbus, OH, found that only 7.6 percent of their average annual medical expenditures paid for hospital care.7 Commercial health insurance did not exist at this time, because potential insurers believed that health was not insurable given the high potential for adverse selection and moral hazard. A writer for The Insurance Monitor noted the following: “The opportunities for fraud [in health insurance] upset all statistical calculations. Health and sickness are vague terms open to endless construction. Death is clearly defined, but to say what shall constitute such loss of health as will justify insurance compensation is no easy task.”8 By 1929, medical charges for urban families with incomes between $2,000 and $3,000 per year averaged $67 if there were no hospitalizations, but averaged $261 if there were any illnesses that required hospitalization.9 In 1934, Michael Davis, a leading advocate of reform, noted that hospital costs had risen to nearly 40 percent of a family’s medical bill.10 These rising costs heralded the precursor to Blue Cross, which was founded in 1929 by a group of teachers in Dallas, TX, who contracted with Baylor University Hospital to provide 21 days of hospitalization for a fixed $6 payment. Prepaid hospital care benefitted both patients and hospitals. Prepaid plans allowed patients to afford hospital care, while hospitals could earn income during a time of declining hospital revenue. At the time, 62 percent of private hospital beds were occupied, versus 89 percent in public hospitals that accepted charity care.11

As single-hospital plans created competition among these facilities, community hospitals began to organize with each other and offer hospital coverage to decrease competition between hospitals. These plans merged into the Blue Cross plans and offered enrollees the choice of physician and hospital, which eliminated single-hospital plans from consideration. Since Blue Cross plans were believed to provide discounted access to low-income patients, these hospital entities initially benefited from tax-exempt status, and were largely free of typical insurance regulations.

Despite the success of Blue Cross and pre-paid hospitalization policies, physicians were slow to adopt the prepaid care model. Blue Shield, which was among the first plans to offer prepaid access to physicians, evolved separately from Blue Cross.12 Increasingly, it became difficult for physicians to ignore the growth of the private insurance market, which exploded in size in the 1940s, growing from a total enrollment of 20,662,000 in 1940 to nearly 142,334,000 in 1950.13

The role of the government in spurring the development of the commercial insurance market cannot be overstated. The federal tax laws regarding employer-based contributions to employee health plans meant employers did not have to pay payroll taxes on their contributions to employee health plans. This encouraged the growth of the commercial health insurance market. Under certain circumstances, employees did not have to pay income tax on their employer’s contributions to their health insurance plans. Under the 1954 Internal Revenue Code, employer contributions to employee health plans were exempt from employee taxable income. As a result of this tax-advantaged form of compensation, the demand for health insurance further increased throughout the 1950s.14

By 1958, nearly 75 percent of Americans had some form of private health insurance coverage. In 1964, there was increasing momentum for enacting a nationalized health insurance policy. Given political differences in the U.S. Congress, a compromise emerged that allowed elderly individuals and those with disabilities to receive coverage. Medicare, which became law in 1965, is a federal program consisting of two parts: Part A is the compulsory hospital insurance program in which enrollment occurs automatically at age 65; Part B provides supplemental medical insurance, or subsidized insurance for physicians’ services. Medicare has rapidly grown, from 19.1 million in 1966 to 46.6 million in 2010.15,16

Heightened awareness of the expenses caused by the health care system led to the introduction of the free market ideas of value, efficiency, and cost control in the 1980s. A lack of self regulation and reluctance on the part of the medical community and physicians to realize and adapt to these new developments allowed government and insurance companies to lead in defining the new structure of health care.

The Balanced Budget Act of 1997 attempted to control the increasing expenses of the Centers for Medicare & Medicaid Services by capping the number of resident training positions at the 1996 level and tied medical spending to the growth of the economy via the
sustainable growth rate formula (SGR). Based on the SGR, physician reimbursement for Medicare patients would have decreased every year since 2002. Concern about the potential effects of the SGR-related cuts, such as decreased physician access for seniors, resulted in congressional suspension of these cuts on a yearly basis.

Most recently, the Affordable Care Act introduced changes that will influence the health care system for years to come. In addition to increasing medical coverage to larger parts of the population, the concepts of cost control, value, and efficiency will continue to play increasingly important roles in the future.

**Payment systems around the globe**

Health care systems and physician reimbursement differ substantially among individual countries. However, most of these differences merely represent rearrangements of certain basic elements and concepts. Knowledge of the basic principles of health care and physician payment systems in other countries is pertinent for discussion regarding health care in the U.S.

In England, the National Health Service (NHS) covers all patients. General practitioners (GP) are mandatory gatekeepers coordinating each patient’s care. GPs are paid by local primary care trusts that provide a capitated payment per patient. Pay for performance—for example, higher reimbursement for good outcomes—is available through participation in quality improvement networks. Specialists, mostly working in salaried positions at NHS hospitals, cannot be consulted without referral by a GP.

In Germany, health insurance, whether public or private, is mandatory for all citizens. Employers and employees share the costs for public insurance; less than 20 percent of the population above a certain income level can buy private insurance. Primary care providers (PCPs) in solo practices are most commonly structured as fee-for-service models. The total spending for each patient is capitated. As soon as a PCP has spent more than the allotted amount of money, there is no further reimbursement. It is common for specialists to be employed in salaried positions at hospitals. The strict cost control comes at the price of relatively low physician incomes.

In France, universal coverage, financed by employers and employees, is frequently supplemented with private insurance. PCPs and specialists are mostly in private practice environments, and the global budget (similar to the resource-based relative value scale in the U.S.) is negotiated between physicians, insurance companies, and the government. Under certain circumstances, physicians can charge more than the basic rate. Strategies for cost and quality control include assignment of gatekeeper physicians, quality auditing, and physician profiling with, for example, monitoring of physicians’ resource use and prescribing behavior.

Universal coverage in Japan is financed by the employer, the government, or the local community, depending on a patient’s employment. Physicians employed by hospitals are poorly compensated, and private, fee-for-service practice is common. Basic reimbursement for services is calculated by the government using a formula similar to the SGR, and reimbursement for excessively used services can be decreased by the government. Separation between PCPs and specialists is less strict than in other countries, and specialist certification is less formalized.

Variations of fee-for-service reimbursement are most common in many major health care systems. In contrast to physicians in the U.S., specialists around the globe are more often salaried employees, with fewer income differences between general and specialist providers. Stricter cost control in the form of global budgets, capitated budget, and government surveillance are also more common. These cost control measures result in physician associations or unions that are more heavily involved in payment negotiations, but also limit overall physician income.

**Physician impressions/survey data**

Today, physicians in the U.S. are made up of many generations with differing career goals and aspirations. Historically, older physicians have been most
successfully recruited into hospital employment, but recently this custom has changed.

Younger physicians are more often opting for salary-structured employment in lieu of managing a complex business model, especially in light of the uncertain and often-changing health care field. In addition to reduced responsibility for the business aspects of medicine, these positions more frequently offer loan repayment, benefits, and/or enticing signing bonuses. Loan repayments can be real incentives for graduates with large student debt loads. In addition, employed positions may be better able to accommodate shifting generational preferences such as flexible work hours and work-life balance.

Established physicians are also finding benefit from employed status due to the uncertainty of future reimbursement. According to a 2010 Medical Group Management Association survey, 65 percent of established physicians were hired into hospital-owned practices in 2009. Guaranteed income in the years prior to retirement offers security as physicians transition out of medical practice. Medicine is also faced with an increasingly older population—resulting in more Medicare patients, which can limit reimbursement as physician practices age. This situation can result in greater financial concern at a time when physicians are attempting to limit their practice.

Private practices are often faced with similar difficulties of reimbursement, a situation that may cause physicians to become interested in employed positions. More time is required for filing claims, providing documentation to insurance companies, and other administrative tasks. As the business of medicine becomes more complex and reimbursements are decreased, physicians are forced to choose between managing patients and managing the business aspects of their practices. Employed positions offer physicians the ability to focus on patient care.

As hospitals have been moving toward employment models, payment structures have been undergoing manipulation as well. While productivity is currently the most common type of bonus, interest is shifting toward bonuses based on quality, outcomes, and patient satisfaction. Hospital employment may shelter the physician from immediate front-line business interactions, but it is unlikely to shelter them from the far-reaching changes of the health care climate.

**Summary**

History has shown that the professions of medicine and surgery have been in constant evolution. Physicians, including the historical barber surgeons, often remained focused only on medical practice and patient care. As a result, the medical profession had a reactionary response to the financial and political circumstances that developed over time. Subsequently, physicians have worked in environments designed by nonphysicians lacking the benefit of medical insight. The most poignant example of this in the U.S. was the rapid development of private insurance and Medicare. Due to the surrounding financial and political forces, these programs rapidly changed the practice environment of medicine. Physicians found that they needed to participate in these programs to remain financially solvent. Various countries around the world have faced similar challenges of increasing health care cost. As populations expand, the need for care increases, but is limited by available resources. These global experiences can lend insight into the effects of different models and how variations may or may not work within the U.S. The effects of those systems demonstrate the importance of physician input into the development of new models.

A long-standing unwritten rule in medicine has taught generations of physicians to avoid discussing reimbursement and health care politics. Yet, in order to recruit the brightest minds with a compassionate bedside manner, excellent judgment, and high vigilance toward patient care, medical professionals need to discuss topics related to reimbursement. The government, insurance company administrations, and other lobby interest groups freely express their interests in these issues. Physicians must engage in health care politics to ensure an adequate physician pool in the future to take care of patients. By influencing the structure of the health care system, including physician reimbursement, all patient care can be positively influenced.

**References**

Do more requirements make a better surgeon?

Editor's note: The Resident and Associate Society of the American College of Surgeons sponsored a symposium at last year’s Clinical Congress in Washington, DC, to debate the question, “Do more requirements make a better surgeon?” Following are the viewpoints of residents who participated in the symposium.
Do more requirements make a better surgeon?

Do simulator training and duty hour restrictions lead to safer surgery?

by Theresa M. Conyac, MD

As the scope of medicine continues to broaden, general surgery is forced to follow the trend toward surgical specialization. To compensate for work hour restrictions, more postgraduate fellowship training programs have been instituted. As the public demands specialty care, residency programs are placing emphasis on certification and core-modulated curricula. Bundled into this concept is the issue of improved patient safety via duty hour restriction and simulator training in lieu of live patient care. Needless to say, the “see one, do one, teach one” method is rapidly running dry, while simulator modules and online evaluations become more prevalent.

Where is the steepest learning curve in the physician training process? Which cases in residency training bring forth valuable pearls learned for a lifetime? Anyone having experienced resident training in the past will likely favor true “hands-on” patient care over the now-conservative learning repertoire. In reflecting on the experiences of the green novice as compared with those of the weathered expert, the current training program seems clouded behind a widening paper trail of duty hour rules and documentation diversions when compared with the way it used to be.

The argument for fellowship training after general surgery residency has forever altered the regimen of surgical education. With evolving work hour restrictions, deficits in surgical accuracy have become more evident. As a result, young attending physicians exhibit insecurity regarding technical skills after the completion of baseline training. This insecurity has forced physicians to actively work toward fellowship training in order to guarantee safety and appropriate technique, and ensure an excellent standard of care for their patients. Simulation falls short when used to improve surgical performance and proficiency in the operating room. A randomized control trial performed by the Royal Australasian College of Surgeons found that—although a single computer simulation demonstrated better results than no training—no significant improvement on operative performance was found when compared with surgical drills. Surgical simulations have their place in physician education, but the reliability of how these methods actually improve performance is still in question.

Surgical residents must develop a vast skill set in a finite amount of time. Further investigation of simulator training is needed until more data can show that simulation actually improves performance. Residency trains physicians to know how to consistently perform a procedure accurately and reliably. For first-time procedures, simulation is of benefit as it can outline the procedural skeleton step by step. However, improvements in technique and skill via simulator training have yet to be clearly delineated. During simulation, immediate feedback on technique may not be as well-demonstrated as it is with instructor observation, during which immediate criticism and alternative surgical techniques are readily available.

With the advent of the 80-hour workweek, residents are gaining less patient care exposure and, as a result, less opportunity for cultivating experience. To address this concern, residency programs nationwide are emphasizing the six core competencies. The Accreditation Council for Graduate Medical Education instituted these core competencies in order to improve surgical training, promote curricula success, and prime clinical faculty with a success mindset. The addition of the core competency curricula is expected to have a profound effect on how residents are educated and evaluated. Due to the improved system of evaluation and the structured method of educating, patient safety is also expected to improve.

While these changes sound palatable, little improvement has been concretely identified to date.
The expectation is that future research will show improved patient outcome and clinician aptitude.\(^9\) In the meantime, residents will enjoy the educational transition, copious required documentation, and time spent test-taking in lieu of patient interaction, with the hope that improved competency, lower cost, and increased patient safety will be the end result.

In application, the source of the core competencies stems from the Federal Aviation Association and the use of Crew Resource Management, which include processes such as team skills assessment, fatigue reduction method, and root cause analysis. These training tools are thought to have resulted in safer aviation, and these safety practices have been the basis for the new residency-training model.\(^9\) In aviation, these processes have led to safer air traffic movement. However, the overall success of the program resulted from standardization and cohesive group participation, not necessarily from increased testing or simulation time.\(^10\) Although aviation management strategies are similar to surgery in that experience comes with numbers. Fewer live cases means less time available to participate in cases, resulting in less surgical proficiency and fewer learning opportunities. Limited work hours make for limited patient contact. The bottom line is that duty hour restriction has little to no effect on fatigue reduction, nor does monitoring duty hours does not directly translate into fatigue reduction, especially if duty hour monitoring ultimately results in an increased workload. Duty hour restriction also reduces the amount of time available to participate in cases, resulting in less surgical proficiency and fewer learning opportunities.

More documentation combined with decreased hours means less time for cases and more time consumed by paperwork. Documentation, testing, and simulation will not improve performance quality or increase a resident’s exposure to surgical cases. Surgical proficiency comes with experience, and experience comes with numbers. Fewer live cases means fewer surprise hurdles to overcome, resulting in less proficiency for what may lie ahead. As residencies continue to replace true surgical cases with simulator scenarios, unforeseen complications will become uncommon and unfamiliar, leading to a confident yet unprepared attending physician. Imagine the first experience of unintentional ureter bisection as an attending, with little competency of how to make the repair. This scenario could have been avoided by replacing time spent filling out time cards with an hour-long case of bladder cancer resection.\(^11\)

### References


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\(^1\) Reference added to complete the document.
Do more requirements make a better surgeon?

Who will land the plane in the Hudson?

by Konstantinos Makris, MD

During the past two decades, the practice of surgery and the training of the new generation of surgeons have been marked by dramatic changes. Minimally invasive techniques have been adopted as the optimal surgical approach in almost every aspect of surgery, enforcing new paradigms in training. Simulators have been introduced and mandated in the surgical curriculum. Work-hour restrictions have been implemented, in order to increase patient safety through care delivered by well-rested residents. Increased documentation requirements have become a major feature of surgical practice and have been incorporated in training as a marker of residents’ professionalism. Surgeons are expected to meet a rapidly growing list of requirements that reflect professional competency and improved outcomes.

It would be intuitive to assume that implementing more requirements would lead to better surgeons. More training—as documented by meeting more set requirements—will confer advanced skills. Simulation practices will confer safety and effectiveness to the residents’ and surgeons’ performance, both in the operating room and in the management of clinical crises. Incorporating finance and ethics sessions in the training curricula seems an absolute necessity in the current demanding environment. Detailed documentation will allow for better recording of a patient’s clinical course and will make transitions of care safer. After all, the airline industry, to which the art of surgery is so often compared, has achieved the highest levels of safety by establishing strict requirements and numerous checklists.

Before accepting the assumption that more requirements make better surgeons, though, it is important to define what makes a surgeon great and what kind of measures can reflect this superior quality. Solid, comprehensive training and well-rounded educational background are undeniable key features of a great surgeon. Training benchmarks can potentially capture the level of proficiency the surgery trainee has achieved in that regard. However, the superior qualities of a great surgeon are imprinted in our minds as commitment to individualized patient care, leadership, ability to manage crises, creativity, and, foremost, dedication to the advancement of surgery. The question we then need to address is: what type of criteria or requirements can reflect these unique attributes of a great surgeon? Do current requirements serve this purpose and will additional requirements offer more benefits? Will these requirements promote commitment, dedication, vision, and hard work? Will they transform a good surgeon into a great surgeon? Analogically, would more requirements in pilot training produce pilots who would not only successfully complete a routine flight, but would also safely land a powerless aircraft in the Hudson River?

It is hard to argue against requirements in surgical training. They have been present since William S. Halsted established the first surgical residency model, even though initially they were poorly defined. In the current era of standardization of procedures aimed at a uniform quality level, it is not easy to advocate against standardization of surgical training, which inevitably calls for more pre-determined requirements. The practice of surgery itself is also called to standardize its function to a certain extent, despite the notion that there are no “standard patients” who can receive “standard treatments.”

Additionally, the general public is requesting more transparency and control in the function of vital societal structures affecting our lives, from economy and politics to health care, with surgery probably inciting the most emotional responses. Patient safety is the acclaimed goal, and attempting to reduce the existing requirements would lead to a sense of cover-up and raise concerns about the true goals of the surgical community. Such an effort would likely result in a detrimental disruption of the patient-surgeon bond of trust, particularly in

the current fluid environment of health care reform. However, we should not be carried away by a continuous adoption of new requirements. Careful re-evaluation of existing requirements and a clear demonstration of clinical outcome benefits should be performed prior to implementing new requirements. For example, studies have shown the benefits of simulation, tracking working hours, and better documentation. Although improvement has been shown in specific benchmarks (for example, faster knot-tying with Fundamentals of Laparoscopic Surgery training), there is no level I evidence suggesting that similar improvements have been achieved in clinical outcomes. Adopting new mandates without critical judgment will not lead to better surgeons, the same way more testing requirements do not necessarily improve the quality of education. All requirements should be constantly re-evaluated with regard to their necessity, whether they serve their intended purpose, and the benefits they truly confer. Plans to amend or abolish unnecessary or ineffective requirements should be in place.

Physicians traditionally refer to surgery as “art and science,” a description that represents the deep essence of our profession and its dual nature—sentiment and intellect, experiential maturation and structured training, inspiration and fact-based judgment. But then, how can art be measured, and what kind of related requirements should be applied to it? How can specific goals be established for the facets of surgery that are not taught, but are lived, experienced, and absorbed by the surgeons during their maturation in training and practice? These untaught qualities are the ones that make surgeons unique and admired by their medical colleagues. Mastery of these qualities has established the best among us in our surgical community, and although we all recognize them, it is unclear how we can quantify and measure these untaught qualities in a standardized fashion.

Perhaps most importantly, what needs to be avoided is the shifting of our surgical training and practice focus from patient care to fulfilling long checklists of requirements. Overstressing the importance of requirements carries several risks. Assuming that meeting requirements automatically leads to better practices and improved care ignores the dual nature of our profession. Initiative, inspiration, and dedication—the driving forces of great surgeons— can be diminished by fixation on rules and mandates. These unintended consequences should be part of the necessary re-evaluation process.

In conclusion, I believe requirements can contribute to the production of adequately trained surgeons, who offer a standard level of care. However, these requirements are neither the sole, nor the most important prerequisite for developing great surgeons. Training that is guided not by tests and requirements, but by dedicated teachers, who lead by their example, instilling principles and knowledge in their trainees, is what primarily will lead to developing great surgeons.

Should we then reduce the requirements in surgery? I don’t think that is the solution, but we do need appropriate requirements that can truly make a difference. Surgeons have always pushed for safe surgery and good, reliable outcomes data. They are accustomed to facing their frailty as humans during morbidity and mortality conferences, and they are humbled by realizing their limitations on a daily basis. They are not afraid of criticism. Therefore, surgeons should be the ones critically assessing the need for requirements and adopting them when the evidence warrants such action.

After all, our goal should not be developing a generation of surgeons who simply comply with rules, meet requirements, and deliver standard care, but rather, a generation of highly qualified surgeons who, when called upon, will land the plane in the Hudson River.

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Do more requirements make a better surgeon?

The era of the simulated surgeon

by Kevin Modeste, MB,BS

With recent advances in technology, the field of surgery has become more of a science than an art. The physical exam has been replaced by computerized axial tomography scans. The new surgeon must know how to interact with a robot as well as be able to learn the square knot tie.

The use of technology, combined with the 80-hour workweek and core competency requirements, has made surgical training even more demanding for residents, as well as for educators (some would say even more so) and for hospitals. Does all of this training make a better surgeon?

The role of the surgeon is constantly evolving, and the introduction of laparoscopy into the field in the 1980s, and the almost exponential rise in technological advances and techniques, has pushed the surgeon to expand his or her knowledge base.

Since the 1960s, the importance of simulator training has been examined. Abrahamson and colleagues looked at the benefits of simulator training with intubation among anesthesiology residents.* The Fundamentals of Laparoscopic Surgery course is a new requirement that I think is essential to training, and studies have shown that there is significant improvement with skills if residents attend practice training.† Some of the detractors for simulator training would say that no matter how much a physician trains, the experience is quite different in a real human; but I believe simulator training is actually safer for patients. After all, would anyone really want to fly on a plane with a pilot or copilot who did not spend time on a simulator preparing for possible disaster?

The 80-hour workweek has also pushed the need for more requirements, which means the resident can no longer be in hospital doing 1,000 gallbladders in an effort to perfect his or her technique. The trainee will now have to use a combination of simulation training and actual technique to reach the level of his or her predecessors. Residents are faced with a very interesting dilemma—we have more technology, more advancements, newer medications, and evolving treatment regimens to learn in a limited time, and yet, there is also the need to be evaluated in a very objective and efficient manner. This conundrum has helped drive the need for additional requirements. I believe these changes to be long overdue. As a group, we should demand the best of ourselves and we should demand the best training possible—our patients deserve it.

The effectiveness of simulator training has been extensively studied and has shown the positive benefits of such training. One of the more recent studies involving a robotic simulator was conducted by Lemer and colleagues, in which the authors concluded that simulator training can be used as a safe method for acquisition of skills.‡ Simulator training can also be conducted at home, which can effectively help the resident adhere to the workweek requirement.

Simulation labs with animal models also give the resident and surgeon the ability to practice with new technologies such as electronic dissectors and stapling devices. These techniques can be perfected without compromising a patient’s safety.

The patient population we are treating also has changed. With the advances in critical care and the increasing age of patients, these individuals require a surgeon who is not only trained in the operative field but also well-versed in critical care.

I believe that more requirements do make a better surgeon. Residencies of the past used to use attrition to account for who would be advanced. That selection method relied on subjective, rather than objective, tests. Would a physician who could be awake for 50 hours straight be a good surgeon? Or would a physician who can safely make the correct decision regarding if and when to operate on a patient (keeping with the standard of care), and who can deal with the technical aspects of the procedure make a better surgeon?

The medicolegal aspect of medicine has also evolved, requiring surgeons and residents to take part in risk management seminars. These requirements are essential and reflect the constant evolution of medicine.

These seminars also make doctors aware of what happens outside of the hospital or office and in the “dreaded courtroom.” The seminars also improve doctor-patient interaction, and, ultimately, promote patient safety.

The Accreditation Council for Graduate Medical Education has also promoted six core competencies for resident training, which, for surgery, has expanded training outside of the operating room. I believe this training is essential, as a good surgeon must first start by being a good doctor.

The modern surgeon has evolved from being the “captain of the ship” to a team player. The evolution is beneficial not only to the patient but also to the profession as a whole. The requirements, as demanding as they might be, direct the development of a modern surgeon who will be able to perform safe and effective practices in the current environment.

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Approaches to maintaining high-quality surgery training in the twenty-first century

by Wissam Raad, MD

Pursuing a career in surgery involves intensive training, rigorous certification, and lifelong continuing education. Surgeons have arguably assumed an elite position among medical specialties, and the standard of surgical training in the U.S. has been considered the finest worldwide. Our training system attracts not only some of the finest graduates in the U.S., but also graduates from all over the globe. However, it has been suggested that additional requirements are necessary in order to continue producing better surgeons. Hypothetically, this can be achieved by increasing the amount of testing, spending more time on simulators, tracking work hours diligently, and requiring improved documentation.

Commitment to excellent care and education

Commitment to a surgical career involves dedication to education, training, and patient care. The core competencies established by the Accreditation Council for Graduate Medical Education (ACGME) require physicians and surgeons to have demonstrated competence in medical knowledge, patient care, practice-based learning, systems-based practice, and professionalism. Residents are also expected to demonstrate appropriate interpersonal and communication skills. Therefore, to ensure patient safety and delivery of optimal quality care, it is important to implement training requirements to imprint, monitor, and measure those competencies.

Growing patient expectations

The medical field is continuously advancing, and new surgical knowledge, technology, and interventions are constantly being introduced. In conjunction to the biotechnological boom of the past few decades, patients have become increasingly educated and sophisticated. Medical information is readily available on the Internet and can easily be transmitted to patients’ desktops, laptops, and hand-held devices as desired. Additionally, patients demand a highly competent physician to answer their questions and address this overwhelming flood of information, in a patient and knowledgeable manner. It is important to expand the requirements in order to enable surgeons to face the stress of an ever-increasing investment of time into practice, and the stress induced by a society with escalating expectations.

Surgeon shortage and our leadership role

Many extrapolation studies indicate that the U.S. is facing an imminent critical shortage of surgeons. International medical graduates (IMGs) constitute a significant percentage of trainees who fill this gap, often due to the fact that they seek the quality surgical training provided in the U.S. However, the world is witnessing a revolution in surgical training, and many countries are developing competitive and technologically advanced training opportunities for their graduates. The medical community in the U.S. is committed to carry on this legacy of leadership and to continue to attract the best candidates worldwide,
not only to fill the shortage, but to produce better surgeons. The medical community in the U.S. must prove to the world that it remains committed to its high standards, and that it intends to continue to expand and improve the training of surgeons.

**Regular ongoing testing, more simulator practice**

Introducing more testing and spending more time on simulators improves patient safety. Examination preparation encourages surgeons to maintain pace with current knowledge; however, surgeons must also keep up with advancements in biotechnology and the development of novel minimally invasive techniques.

In the near future, patients will have the right to access their physicians' examination scores. Therefore, frequent testing provides a better assessment of medical knowledge than the two tests that currently assess a physician's surgical career at the completion of training.

Simulators are effective tools that help surgeons practice skills on their own time and at their own pace, and residents should be encouraged to spend more time on them. This practice will likely improve physicians' dexterity and familiarity with the instruments, while also providing an additional relevant method of evaluation. Several studies have demonstrated a superior outcome with the use of simulators in training.8,9

By choosing a surgical career, physicians undertake a lifelong commitment toward improvement and continuous learning in order to advance knowledge, minimize error, and ensure patient safety. Evidence has demonstrated that adults retain information better when stress and pressure are minimized, and when they encounter problem-based examples derived from real-life scenarios.10 In addition, several studies have suggested that learning surgical skills on simulators transfers those skills to the operating room.11,12 Therefore, more testing and more time on simulators favorably impacts both the surgeons' proficiency and their patients' safety.

**Tracking and documentation of work hours**

Additional focus should also be placed on minimizing stress and improving the lifestyle of surgeons. This may be accomplished, in part, by tracking work hours diligently and by implementing better documentation. Tracking work hours will help organize time, improve the surgeon's lifestyle, and create a healthy sense of well-being that leads to a more focused individual during critical decision making. Tracking work hours also helps surgeons improve their interpersonal and communication skills, which are essential for interacting with patients.

Introduction of the work hour limitations certainly has had a positive impact on the safety and quality of life of the surgical trainees and their families, an improvement in their examination scores, and decreased fatigue among trainees.13

Enhanced documentation creates a sense of security and organization that leads to peace of mind, efficiency, and better patient-focused activity. More importantly, work hour limitations simplify and facilitate systems-based practice and practice-based learning. With the introduction of efficient electronic medical records and electronic portfolios, time constraints that limit documentation should no longer be problematic.14,15 Documentation also helps protect the surgeon from medical liability and malpractice suits. This protection provides an additional sense of security, confidence, and tranquility within the surgeon that ultimately enhances patient care, doctor-patient relationships, and overall professionalism.

**Conclusion**

The surgeon’s commitment to excellence in patient care and surgical education—characterized by the six core competencies, the exponential advancements in medical knowledge, escalating patient expectations, shrinking surgeon supply, and the need for worldwide confidence and credibility in our leadership role—drives the medical community to introduce more requirements into the current system in order to continue to “produce better surgeons.” These requirements include enhancing the testing methodology, encouraging surgeons to spend more time on simulators, tracking work hours meticulously, and improving documentation. By implementing these changes, the medical community should be able to continue producing better surgeons who will satisfy the needs of the foreseeable future.

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It is time for a paradigm shift in surgical training regulation

by Omar M. Rashid, MD, JD

In medicine, new interventions must be shown not to do any harm before they are even evaluated for efficacy. In regulation, however, new rules are held to a different standard. The test for new regulatory requirements is whether or not they improve efficiency, and, consequently, reduce costs. Proponents of extending the current regulatory regime in surgical training, the most significant of which is duty hours, argue that it will improve efficiency and, presumably, lower costs by protecting resident worker safety, and by improving both trainee achievement and patient outcomes. However, data from the 80-hour workweek experience have not demonstrated such putative benefits. Worse yet, these regulations may be increasing complication rates. The data have shown increased training and hospital costs, and decreased graduate surgical resident complex case experience. The new regulations have raised the specter of a new generation of surgeons ill-equipped to meet the needs of an increasingly complex patient population.

If focusing solely on resident work hours (or using the current, rigid command-and-control paradigm of regulating surgical training) is the most efficient way to improve surgical training and patient outcomes, then current regulations should have improved outcomes. It is difficult to maintain the idea that a rigid focus on duty hours as the sole metric for safety would improve surgical training and patient outcomes, then, that applying this model to surgical training has created in the 1960s and 1970s, and those numbers have flattened out in recent years. It is no surprise, then, that applying this model to surgical training has not improved outcomes.

It is difficult to maintain the idea that a rigid focus on duty hours as the sole metric for safety would improve outcomes in surgery. Using pancreatic resection as an example, the current paradigm is not adequately addressing the needs of an increasingly complex patient population.
example, surgical safety is a complex and dynamic function of experience, volume, and resources, with many subtleties noted in the literature regarding what the appropriate metrics are for improving outcomes. Focusing more on duty hours will only move surgical training further away from what is important regarding improving patient safety and training.

For regulation to improve efficiency and outcomes in surgical training, the system must adapt to the complex reality of the field it was constructed to improve. In fact, a recent proliferation of private innovations in surgical safety regulation is already trending in this direction. Rather than increasing the focus on duty hours as a proxy for improving outcomes, the regulations should, instead, be reformed to allow for greater flexibility, accounting for the complexity of surgical education and safety, and have a direct focus on promoting initiatives to decrease complications and increase time spent mastering surgical skills.

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Volume dictates outcomes
by Gokulakkrishna Subhas, MD

A surgeon is a person who specializes in surgery—a broad category of invasive medical treatment that involves the cutting of a body. The very definition of a “surgeon” has the power in it to invoke romantic visions, glorified all the more by the current slew of television medical dramas. However, only those who actually practice this branch of medicine can realize the true gravity of the job and the implications of a wrong step. Surgery is indeed an unforgiving endeavor, at times, with little or no room for error. Add to that the circumstances that surgeons typically have to work in (such as operating for hours at a time) and the chance of error increases exponentially. Considering this margin for error, it is all the more important that individuals who are licensed to practice surgery be well-trained in their art—for lives depend on them.

I consider myself fortunate to have worked in three different health care systems. My initial training was in India, where the patient load is colossal, but the actual number of cases performed independently fails to measure up to the mark, mainly due to a shorter three-year training period. Thus, graduating residents don’t feel confident to enter private practice. The U.K. has a longer training period of five years; however, the shorter workweek (40 hours) again translates into fewer cases, and consequently, less dexterity. I have come across an upper gastrointestinal surgeon, fresh out of training, who was not confident about performing a distal gastrectomy and, therefore, had to elicit the help of his superior when faced with the task. This deficiency is partly explained by the absence of a central regulatory body, such as the Accreditation Council for Graduate Medical Education (ACGME), and the fact that there is no fixed minimum number of case requirements needed to graduate.
Surgeons are akin to pilots—they share common personality traits, and they both involve high-risk jobs with the responsibility for the lives of others. Surgery and aviation also share a blending of hand-eye coordination with rapid cognitive processing. Adequate quality and quantity of relevant operative cases ensure that residents overcome procedural learning curves and excel in patient care. “See one, do one, teach one” has been the basis of surgery training since William S. Halsted, MD, introduced the clinical apprenticeship model in resident education. This model has galvanized many generations of surgeons and will always play an important role in our training. Many studies have shown that trainees acquire skills more effectively and efficiently when they follow a structured, goal-oriented curriculum than by random practice. Contemporary training, then, should go beyond seeing one, doing one, and teaching one. Today, resident training should be well-structured and organized, break through localized boundaries, and address technical and cognitive skills, as well as improve and enhance the multitude of other attributes required by today’s surgeon. But, in the end, surgery is a skill and, like any other art form, it can only be perfected by constant practice. If I were the patient, I would definitely choose a surgeon who had done a thousand procedures over one who had done only 10.

General surgery residency programs, under the auspices of the ACGME, have been working extensively toward establishing curricula that address resident training needs, especially in the new age of the 80-hour workweek. Since duty hour restrictions were introduced, there have been small but notable declines in the number of total surgeon and surgeon chief operative cases reported by graduating residents. Over a longer time period, operative cases reported by graduating residents in the roles of first assistant and teaching assistant declined dramatically. Although some of these declines were gradual, recent declines may have been accelerated by the 80-hour duty hour restrictions. These trends must be considered as the education and training of present and future surgical residents is considered.

If changes are not made to current training programs, future trainees may feel ill-equipped to fulfill the duties of an attending surgeon and may be vulnerable when confronted with a disorder or complication not previously encountered during training. There needs to be a radical reappraisal of surgical training, taking into account the peculiar requirements of surgery as opposed to other branches of medicine. Medicine can be practiced by examining the same patient many times over. While one cannot discount the importance of the physical examination in surgery, the fact remains that, ultimately, the dexterity and skill set that is the benchmark of surgery can only be accomplished by, for lack of a better word, operating.

Cases involving minimally invasive techniques may account for a large percentage of cases in the foreseeable future. The increased awareness for patient safety has brought up another important element of the residency curriculum—skills training on simulators. While simulators cannot replace surgical experience, they do help to absolve the learning curves of new procedures on inanimate models. There is no substitute for practice, whether it is on the simulator or in the actual operating room. Simulators prepare us up to a point, but they can only do so much; the actual experience gained by operating is hard to match, and for this reason, must be preserved in its entirety.

I wish to conclude by looking at these issues from a larger perspective. Surgical training has to be balanced, with the right mix of operative experience, outpatient training, and critical care, not to mention training in areas such as burn management, and exposure to the various subspecialties. But when you dissect the issue of surgical training to the core, as a surgeon you simply need to know how to operate. A safe surgeon is one who inspires confidence, something that can only be gained by practice. I believe that “volume dictates outcomes.”

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The question of whether additional requirements make a better surgeon can be approached in one of two ways: by an intelligent reductionist approach of analyzing each requirement and verifying its benefit, or by what some may define as the “wise” gestalt approach, wherein the entire idea of increasing certification requirements is analyzed. I choose the latter approach—not only because the combination of several components is not always its sum, but also because wisdom is perhaps more far-reaching than intelligence.

For the gestalt approach, the question of whether additional requirements make a better surgeon is better viewed by posing other questions such as: Is surgery more of a cognitive task or a mechanical skill? What drives excellence—external or internal motivators? Do we need a system where all surgeons are good, or a system where some surgeons are the best?

**Analogy: The candle problem**

The candle problem is a simple test of cognitive skill, designed by Karl Duncker, a German psychologist. The test measures “functional fixedness” or cognitive bias.1, 2 It measures the ability of the subject to think practically, his or her ability to establish simple, real-life solutions, and also mechanical skill. When the experiment was given to two groups of subjects—one assigned to simply complete the task and the other assigned a reward for successful completion—the reward group performed worse than the other group. Interestingly, when the same experiment was modified to make the cognitive component of the solution easier while maintaining the mechanical component, the reward group performed far better than the other group. The researchers concluded that as long as the task required only mechanical skills, incentives improved performance. But, if the task required even a rudimentary amount of cognitive skill, such a reward only worsened performance. Conceptualization of this finding in real life would imply that working for the achievement of a target or the satisfaction of a requirement would worsen the performance of a surgeon, whose work is essentially a cognitive task, realized by mechanical skill.

**Analogy to reality**

A surgeon in training invariably views certification as the eventual reward for the long, arduous years of training. If the achievement of that reward is a long shopping list of requirements, the surgeon becomes occupied with the timely gratification associated with these requirements, thereby becoming mentally unavailable for passionate indulgence in learning, creativity, and cognitive innovation. For those who have a reductionist view of surgery as the mastery of mechanical skill alone, increasing requirements may appear necessary. But for those who view surgery as the cognitive task of caring for a patient who needs anatomical changes to convert pathology to physiology, such requirements are more bane than boon.

**Excellence or mediocrity?**

While it may be true that increasing requirements, regulations, and a stricter infrastructure may result in the improvement of the “average” quality of the surgeon, deliberate efforts to conform to such norms may blunt the manifestation of excellence among those who have the potential to become the best. This point of view is not without example or evidence. Several other countries may graduate more scientists than the U.S., but none of these countries was the first to land a man on the moon or invent the Internet.

Another example from the field of medicine to show that requirements don’t necessarily reap the intended benefits would be a comparison of U.S. and Indian residency requirements. Unlike in the U.S., where board certification is a voluntary process, in India, certification through an elaborate and sophisticated examination process is mandatory to enter practice as a general practitioner after medical school or in a trained specialty after residency.3, 4 Moreover, included among the theory, clinical, and oral examination requirements for certification after residency is the completion of a research project (called a dissertation or thesis) under a mentor—a requirement designed to promote research productivity in India.

It might not be unreasonable to expect a high level of research output and scientific medical advance-
ments from India, which is said to produce the largest number of doctors in the world (30,408 from 271 medical schools),5 with currently more than 13,500 residency spots across the country.6 Unfortunately, that is not the case. It might be accurate to speculate that U.S. residents (who are not bound by such a requirement) probably conduct more research and publish more than their Indian counterparts. However, it cannot be inferred that Indians are less inclined to or less capable of research or scientific investigation, for this would be proven false by the obviously significant proportion of Indian researchers in the U.S. It can only be inferred that the research requirement and other regulations designed to be an external motivator for residents has not only failed, but also has vanquished the physicians’ internal motivation.

As a surgical resident in the U.S. who has completed his medical education in India, it appears to me that what drives people to excel is that which has attracted them to the U.S. as well—a passion to pursue their own dream and the guarantee of freedom and lack of coercion to do so; and by that, I mean the ability to respond to internal motivation, unperturbed by distractors disguised as external motivators.

**Safety is not related to requirement of competence**

A safe surgeon is not the one who is most competent in a given skill, but the one who is most astute in recognizing his or her own limits of competence and skill, is honest in admitting to that limit, is courageous enough to seek help, and is committed to learning to further that limit. Safety is a matter of ethics, the learning of which has been largely involuntary during the long hours spent with attending surgeons, watching and imbibing their behavior. If at all, I am only afraid that increasing requirements would compromise this invisible inculcation of ethics, by mandating the residents’ presence in a place without patients or surgeons, such as simulators, classrooms, and testing halls.

So, here is how I rest my case. A community moves forward by the force of its excellence and not by the height of its mediocrity. Such excellence cannot be commanded, but can only be unleashed. While all beneficial methods must be encouraged and recommended, it must not be mandated, only for the fear that it would fall by its own weight. Fear of failure drives mediocrity and courage to face it, excellence.

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“Physicians are storytellers,” observes Pauline W. Chen, MD, FACS, a liver transplant and cancer surgeon, and author of the popular and highly-regarded “Doctor and Patient” column for The New York Times. “Storytelling is such a primal thing and it is so deeply ingrained in our existence and how we look at our lives. For physicians, storytelling is part of everything we do. Even the way we communicate—our notes and patient presentations—is done in stories. It’s hard to talk about a patient case without talking about it as a story—with a beginning, a middle, and then searching for a conclusion, which is often the diagnosis.”
As a columnist and a published author (her book, *Final Exam: A Surgeon’s Reflections on Mortality*, was published in 2007), Dr. Chen is an experienced storyteller—a doctor who wields a pen in an effort to heal the gaps in communication between doctors and patients.

Dr. Chen graduated from Harvard University and Northwestern University’s Feinberg School of Medicine, and completed her surgical training at Yale University, the National Cancer Institute (National Institutes of Health), and the University of California, Los Angeles, where she stayed on as a faculty member in the department of surgery. She now lives in Massachusetts and sees patients in the Veterans Affairs Boston Healthcare System.

Dr. Chen, whose work has been nominated for a National Magazine Award, has written for a number of publications, including *The Virginia Quarterly Review, The New York Times, The Washington Post*, and *Prevention Magazine*. She also speaks regularly to medical and general audiences across the country, such as the Association of American Medical Colleges and the National Hospice and Palliative Care Organization.

Dr. Chen began writing the weekly column three years ago when a *New York Times* editor reached out to her after reading *Final Exam*. Dr. Chen says there are many parallels between surgery and writing: peeling back the layers to get to the root of an issue or topic, the stamina required to work in less than ideal circumstances, and even, at a times, a thick skin.

In the following interview, Dr. Chen shares her insights on writing for the mainstream media and how writing the column enhances her role as a physician.

**Why do you think it is important for a physician’s perspective to be included in the mainstream press?**

It’s interesting—before I first started writing the column, I had the sense through talking with patients and physician colleagues that the patient-doctor relationship had been changing. I thought this column would be great way to explore that change—why it was occurring and what people were doing to prevent that relationship from deteriorating. I feel like I have a foot in medicine and another foot in media, and if there is some way that I can help bridge the gap between the two, then I’d like to be able to do that. I hope that my column, in some ways, helps to do just that.

When you look at the American College of Surgeons [ACS], for example, it’s an organization with a long history of trying to maintain the highest standards of patient care. And there are so many Fellows in the organization who believe in doing the best by their patients and who are working in their practices, their research, or their teaching to do just that.

But the public isn’t always aware of these efforts. I recently spoke with Clifford Y. Ko, MD, FACS [Director of the ACS Division of Research and Optimal Care], for a column I wrote titled “Interns at the Operating Table.”* He has been leading ACS NSQIP® [National Surgical Quality Improvement Program], a program that has had an incredible impact on patient outcomes. It was thrilling for me to let the public know that these kinds of efforts are going on in health care.

**What are the parallels between writing and practicing surgery?**

People have asked me why so many surgeons write, and I think it’s because surgery and writing are so similar. They both have a craft aspect and an art aspect. In surgery, we spend a lot of time perfecting our craft, whether it’s suturing or learning to tie a knot, and we repeat these things over and over again until they feel natural. When you are able to do a liver transplant without thinking about all the technical bits, it begins to feel like second nature. And that is when the artistry of what we do comes through.

The same could be said of writing. At first, it takes a lot to get a narrative to flow just right, but after you’ve practiced the craft a lot, your narrative voice—and the art—will emerge.

**What drew you to write about your experiences in such a public way—though your column and your book? Are there any experiences that you have resisted sharing with readers?**

*Final Exam* was my first major foray into mainstream publishing. I didn’t really realize at the time that once you publish something, the story is no longer yours. Other people read it, interpret it, and embrace or reject it. In a sense, publishing a book or

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writing a column is a lot like having a child—at some point that “child” has to go out into the world and will take on a life of their own.

To be honest, I don’t think I realized the extent of that process until the first excerpt of my book was published in The New York Times Sunday Magazine and in The Virginia Quarterly Review. I remember being surprised and a little taken aback by how other people were discussing what I thought was my story.

I think I’m more comfortable now with how that happens. It’s pretty incredible to watch my work get published, get its own legs and take on a life of its own, a life that I often cannot predict.

And sure, there are experiences that I want to keep to myself, that I will probably never write about.

Writing the column gives you instant feedback and comments from readers. What have been some of the most insightful reader comments you’ve received over the years?

I love the comments—I love that aspect of online writing. I was a little anxious at first, but I have learned so much from the Times readers. For the most part, their comments are incredibly thoughtful and it’s pretty apparent that they’ve spent a lot of time thinking about the issue. Some of the stories they’ve shared are truly heartbreaking. And occasionally, we get a snarky comment, but that comes with the territory.

I had hoped that these reader comments would help to open communication between doctors and patients. I think it has to some extent. I was at a dinner a few weeks ago, and a primary care physician mentioned how much she enjoys reading the reader comments. She said that they have showed her so much more about what is going on in patients’ minds, and that they have influenced the way she practices.

Talk about the writing process for the column as compared with the writing process for a book. How do they each inform you as a physician?

There’s no question that my life in clinical medicine informs what I write about and the way I write. But what has been fascinating to me is how deeply the influence goes the other way. For example, I did a column on hand-washing, and the whole week I was writing that column, the act of washing my hands took on a whole new meaning. It kind of shook me up. The same happened when I wrote a
column on infection control and barrier precautions.

In terms of writing a book versus a column, I am limited in the number of words I can use in a column. At first I remember thinking, “Okay, here’s my word limit, now that’s all I have to write,” but in fact it’s turned out to be more challenging in many ways. The issues can be so complex that it sometimes seems impossible to explain them in a way that is both understandable and accessible in anything less than a few thousand words.

I was just thinking the other day about what I spend the most time on per column, and I realized that it was the couple of paragraphs where I try to give readers background on the issue and the reasons why a certain study, op-ed, or conference is so new, interesting, different, or exciting. With a book or even a longer essay, you don’t have the same kind of strict word limit and you have the freedom to go into as much detail and discuss as many interesting nuances as you’d like. You don’t have to triage as much.

In Final Exam, you write about your first dissection and how you noticed something interesting about the woman’s facial muscles—that they were not atrophied like the rest of her musculature. For someone who hasn’t read your book, can you describe why this moment had such an impact on you as a doctor-in-training?

You know, before that moment, I hadn’t realized the extent to which someone’s life or even death could be written on their bodies.

I remember the first thing I saw were my cadaver’s hands—she had coral nail polish on and there were little crescents of bare nail at the bases, as if it were time for a new manicure. On her left hand and wrist, she had the tan lines of a wedding ring and a watch. All of these details really struck me at the time. They were reminders that this person lying on a metal tray not so long ago was a woman who could have been walking down the street.

When we finally saw the details of her face at the end of my anatomy course, my lab partners and I had to believe it was some reflection of how she had lived her life. Somehow, in the face of a devastating diagnosis—she died from ovarian cancer—she was still able to smile, to laugh and to use those facial muscles of expression. It was a moving thing and in such stark contrast to the rest of her musculature, which had become markedly atrophied over the course of her illness.

What advice do you have for residents as they are interacting with patients? What are some of the best ways to train new doctors to be more compassionate?

I really believe that the vast majority of doctors go into medicine because they want to help patients. But even with those ideals, maintaining that level of compassion and idealism can be difficult. Medical sociologists have written about the powerful hidden curriculum within our professional culture, one that can wear down even the most compassionate among us. We’ve all seen and experienced that.

I think one of the most important things we can do as educators and mentors is to preserve the
idealism of our youngest doctors. We need to work against cynicism.

There are some amazing educators who have changed our training for the better. I've had the good fortune to speak to chief residents around the country, and it's hard not to notice the results of these educators’ efforts. The chief residents today are much more articulate about, for example, end-of-life care issues. They can talk about palliative care, advanced directives, and hospice in a way that I certainly was never able to. It's changes like these that make me enormously hopeful.

I guess, then, that my advice for residents as they are interacting with patients is to remember always who they were and the ideals they aspired to when they decided to become doctors. It's important, too, to remember to talk about your experiences honestly with your teachers, your fellow residents, and your students, not just to process the experiences, but also to find ways to do better, or to continue to do as well.

What are your thoughts on the ACS publication *Surgical Palliative Care: A Resident’s Guide*?

I am really proud of the fact that the ACS has taken such an active role in promoting palliative care, whether it's through advocating such training among residents or compiling the *Surgical Palliative Care: A Resident’s Guide*.

But it's also not that surprising to me. Good palliative care is contingent on a strong patient-doctor relationship. By promoting palliative care, the College is doing what it has always strived to do—take the best possible care of surgical patients.

I have a question on the topic of time-management: You are a surgeon, a teacher, a writer, you have a family—what advice do you have for your fellow surgeons who want to take on new projects, such as writing, but are apprehensive due to time constraints?

I feel incredibly lucky to have been able to do all that I love or have wanted to do. But it's not been easy or straightforward. And I've had to make choices in my personal and professional life that I might not have had to make otherwise. Do I regret having made these choices? No, I don't, but they certainly required some pretty honest introspection about not only my own and my family's needs, but also the needs of my patients.

Still, when I consider what my parents had to struggle with as immigrants, these challenges of mine are pretty “high quality” problems to have. I've got great family and friends, work that I love, and terrific colleagues and mentors in medicine and in publishing and at The New York Times. I'm very fortunate.

Mr. Peregrin is Associate Editor of the Bulletin of the American College of Surgeons, Chicago, IL.
Last year, the American College of Surgeons (ACS) started a new program to increase the number of chapters that host lobby day programs at their state capitals. The Board of Regents approved a proposal endorsed by the Board of Governors and more than 27 chapters to provide $50,000 over two years in grants for state chapters to organize lobby days during the 2011 and 2012 legislative sessions. Chapters were eligible to receive up to $5,000, but would be required to match that grant with one dollar for every two dollars received.

The level of interest from state chapters regarding the grant program was high, and demonstrated a pent-up demand to increase their state level advocacy efforts. For the 2011 legislative session, 10 state chapters were awarded grants, including Alabama, Connecticut, Florida, Georgia, Indiana, Massachusetts, New York, Northern California, Ohio, and Virginia. At the time this article went to press, seven chapters had held their lobby day events.

The following is a summary of various state lobby days programs, including different approaches for hosting lobby day events, and highlights of some of the important legislation and bills that were discussed with state legislators.

**Florida Chapter Lobby Day (February 8)**

At the Florida Chapter’s inaugural lobby day, a large group of surgeons assembled for a legislative briefing by their chapter lobbyist, Chris Nuland, and a presentation given by ACS Division of Advocacy and Health Policy State Affairs staff before breaking for their meetings at the Capitol.

While meeting with their representatives, the attending surgeons discussed various pieces of legislation, such as an insurance mandate for colorectal screening and sovereign immunity for emergency services.

**Virginia Chapter Lobby Day (February 9)**

A small group of surgeons attended the Virginia Chapter’s White Coats On Call rally at the state capitol. This event was held on the same day as lobbying efforts from the Medical Society of Virginia and was a joint effort with the Virginia Chapter of the ACS to arrange physicians’ meetings with state legislators. Attendees had very successful visits with several members of the legislature, during which they discussed a comprehensive medical liability reform package that was signed into law in April 2010.

**Georgia Chapter Lobby Day (March 23)**

A small group of surgeons met at the end of the legislative session to focus on meeting with the legislative leadership of relevant committees in both legislative chambers. Following a short issue and advocacy briefing by ACS State Affairs staff and the chapter’s Executive Director/lobbyist, the surgeons went to the Capitol building and learned about “working the line,” which occurs when pages are asked to pull legislators from the floor to come out to a rope line to chat for a minute or two with their constituents.

The surgeons also had private meetings with a couple of committee chairs to discuss important legislation, such as liability reform, that is pending in their committees.

**Connecticut Chapter Lobby Day (April 7)**

The Connecticut Chapter held their lobby day along with the Connecticut State Medical Society Doctor Day. Attendees of the lobby day were encouraged to discuss concerns about medical liability reform with their legislators, due to the fact that Connecticut still has some of the highest insurance liability premiums in the country. Surgeons representing the College were encouraged to discuss the Uniform Emergency Volunteer Health Practitioner bill that was introduced this session and would allow physicians and other health care professionals who have out-of-state licenses to volunteer and provide aid for the duration of an emergency.

The lobby day group then reassembled for lunch, during which a newly elected state representative who is a physician and member of the Connecticut State Medical Society gave a presentation.
Indiana Chapter Lobby Day (April 28)

The Indiana Chapter had a great turnout for a first-time visit to the state Capitol building. Attendees gathered in the morning to listen to a number of presentations on the impact of the Affordable Care Act at the state level, as well as a keynote address on health care reform from Dennis Ryerson, editor and vice-president of the Indianapolis Star. In the afternoon, surgeons went to observe the legislature on the second-to-last day of session. Surgeons were encouraged to pull their representatives from the floor to discuss important legislation such as trauma funding and distracted driving.

New York Chapter Lobby Day (May 10)

The New York State Chapter held a lobby day in conjunction with The New York Coalition of Specialty Physicians. A total of eight physician and specialty groups worked together and had members attend from the following: American College of Surgeons New York State, New York State Ophthalmological Society, New York State Society of Orthopedic Surgeons, New York State Society of Otolaryngology, New York State Society of Physical Medicine and Rehabilitation, New York State Society of Plastic Surgeons, Medical Society of the State of New York, and the American Congress of Obstetricians and Gynecologists.

These physicians addressed several scope-of-practice bills with their state legislators. There was also a strong emphasis placed on a bill that would allow dentists to perform surgery on the oral and maxillofacial area, and to perform cosmetic surgery on the eye, face, head, and neck. While the bill was considered to be very viable and passed through the Senate, it did not pass through the Assembly and therefore did not get through the New York General Assembly this session.

There was also a bill pending to allow podiatrists to treat not only the foot, but the ankle and all soft tissue areas of the leg below the knee. Other scope-of-practice bills that were discussed with legislators centered on issues related to optometrists and nurse practitioners. However, those bills did not have enough momentum and support to get passed by the General Assembly this session. It was critical timing for the New York physicians to meet with legislators and discuss all of the potential effects and consequences of these scope-of-practice expansion bills, as these bills are re-introduced every session.

The potential negative consequences of expanding scope of practice should be at the forefront of legislators’ minds when these bills are introduced.

Looking ahead, with three more state chapters scheduled to host their lobby day programs, future updates will provide a recap on those programs. These highly successful lobby day programs have increased the profile and advocacy efforts of surgeons with their state legislators. State chapters that are interested in receiving a grant for the 2012 legislative session should note that applications were sent out to chapters in June with a deadline of September 16, 2011.

Ms. Grill is State Affairs Associate, Division of Advocacy and Health Policy, Chicago IL.
George Berci, MD, FACS, FRCS(Ed)(Hon), a general surgeon from Los Angeles, CA, is the 17th recipient of the Jacobson Innovation Award of the American College of Surgeons (ACS). Dr. Berci—known for his work in the development of microsurgery—was honored with the award in recognition of his pioneering contributions to the art and science of endoscopy and laparoscopy for more than 50 years. His work has included the development—or promoting the development—of advances in optics, illumination, television application, instrumentation, operative radiology, and anesthesia, resulting in the high level of technology that is currently available for the performance of a variety of endoscopic and laparoscopic surgical procedures. Dr. Berci is an emeritus clinical professor of surgery at the University of California and the University of Southern California, and is currently the senior director of minimally invasive endoscopic research at Cedars Sinai Medical Center, all located in Los Angeles.

The Jacobson Innovation Award was presented to Dr. Berci at a dinner held in his honor on June 10 in Washington, DC. Established in 1994 through a gift from Julius H. Jacobson II, MD, FACS, a general vascular surgeon and pioneer in the field of microsurgery, and his wife Joan, the award is administered by the Board of Regents’ Honors Committee of the ACS.

Dr. Berci’s work in endoscopy and laparoscopy began with his studies in mechanical engineering, one of the few educational options available to him in the pre-World War II era in Hungary. Following time spent in a Nazi labor camp in the mountains of Romania and Poland during the war, he pursued his medical and surgical training in Hungary.

Dr. Berci received his medical degree from the University of Szeged, Hungary, in 1950. He continued surgical training at Szeged at the University Hospital, before moving to Budapest in 1953, where he helped to establish an experimental surgery division at the department of surgery postgraduate school. During the Hungarian revolution in 1956, Dr. Berci escaped to Vienna, Austria, where he was interviewed for a postdoctoral Rockefeller Foundation fellowship.

He emigrated to Australia, where he was mentored by Prof. Maurice Ewing at the University of Melbourne. While at the university, he started his studies on the recovery of retained biliary duct stones, as well as biliary endoscopy, and imaging in operative cholangiography.

Dr. Berci’s work in endoscopy started in Australia in 1957, after he was awarded with a Rockefeller Foundation Fellowship in the Alfred and Royal Melbourne...
hospitals. It was at these facilities that he first viewed the inside of a dilated common bile duct with a simple old cystoscope, at which point he realized the poor image quality produced by this tool. That experience marked the genesis of Dr. Berci’s life-long pursuit of endoscopy.

Dr. Berci, who was also interest-

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Location</th>
<th>Achievement</th>
</tr>
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<tbody>
<tr>
<td>1994</td>
<td>Professor Francois Dubois</td>
<td>Paris, France</td>
<td>Laparoscopic cholecystectomy.</td>
</tr>
<tr>
<td>1995</td>
<td>Joel D. Cooper, MD, FACS</td>
<td>St. Louis, MO</td>
<td>Lung transplantation and lung volume reduction surgery.</td>
</tr>
<tr>
<td>1996</td>
<td>Juan Carlos Parodi, MD</td>
<td>Buenos Aires, Argentina</td>
<td>Treatment of arterial aneurysms, occlusive disease, and vascular injuries by using endovascular stent grafts.</td>
</tr>
<tr>
<td>1997</td>
<td>John F. Burke, MD, FACS</td>
<td>Pittsburgh, PA</td>
<td>Development and implementation of innovative techniques in burn care.</td>
</tr>
<tr>
<td>1998</td>
<td>Thomas J. Fogarty, MD, FACS</td>
<td>Portola Valley, CA</td>
<td>Development and establishment of the surgical specialty of craniofacial surgery.</td>
</tr>
<tr>
<td>1999</td>
<td>Paul L. Tessier, MD, FACS(Hon)</td>
<td>Boulogne, France</td>
<td>Development and establishment of the surgical specialty of craniofacial surgery.</td>
</tr>
<tr>
<td>2000</td>
<td>Michael R. Harrison, MD, FACS</td>
<td>San Francisco, CA</td>
<td>Creators of the specialty of fetal surgery and developing techniques of fetoscopy for minimally invasive fetal technology.</td>
</tr>
<tr>
<td>2001</td>
<td>Robert H. Bartlett, MD, FACS</td>
<td>Ann Arbor, MI</td>
<td>Pioneers in the development and establishment of the first extracorporeal membrane oxygenation (ECMO) program.</td>
</tr>
<tr>
<td>2002</td>
<td>Harry J. Buncke, MD, FACS</td>
<td>San Francisco, CA</td>
<td>Pioneers in the field of microsurgery and replantation.</td>
</tr>
<tr>
<td>2003</td>
<td>Stanley J. Dudrick, MD, FACS</td>
<td>Waterbury, CT</td>
<td>Innovator of specialized nutrition support and a pioneer in the field of clinical nutrition.</td>
</tr>
<tr>
<td>2004</td>
<td>Judah Folkman, MD, FACS</td>
<td>Boston, MA</td>
<td>Pioneer in the field of angiogenesis.</td>
</tr>
<tr>
<td>2005</td>
<td>William S. Pierce, MD, FACS</td>
<td>Hershey, PA</td>
<td>Pioneer in the conception and development of new concepts of angiosclerosis, support and the total artifical mechanical heart.</td>
</tr>
<tr>
<td>2006</td>
<td>Donald L. Morton, MD, FACS</td>
<td>Santa Monica, CA</td>
<td>Pioneers in the development and clinical application of sentinel lymph node biopsy.</td>
</tr>
<tr>
<td>2007</td>
<td>Bernard Fisher, MD, FACS</td>
<td>Pittsburgh, PA</td>
<td>Pioneer in the treatment of breast cancer by proposing that it is a systemic disease that metastasizes unpredictably and would best be treated with lumpectomy combined with adjuvant chemotherapy.</td>
</tr>
<tr>
<td>2008</td>
<td>Lazar J. Greenfield, MD, FACS</td>
<td>Ann Arbor, MI</td>
<td>Developed the Greenfield filter, a vena cava filter implanted under fluoroscopic guidance to prevent pulmonary embolism in susceptible surgical patients.</td>
</tr>
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(choledochoscopy) of suspected or non-suspected ductal stones during biliary operations.

Following a 1959 meeting with Prof. Harold Hopkins, a renowned physicist and professor of applied optics in London, UK, Dr. Berci became actively involved in launching the Hopkins rod-lens system for the transmission of images into the clinical application of endoscopy. The system was a vast improvement over the technology used at the time as it significantly improved the quality of the image. Although the system improved the endoscope’s ability to provide a quality image, the level of illumination was not as advanced as Dr. Berci believed possible.

In 1976, he introduced a stronger, but miniaturized, explosion-proof xenon arc globe, which the military developed and he transferred to endoscopy. This form of illumination, which is still used in endoscopes today, increased the quality of endoscopic images as well as recording findings. Even so, Dr. Berci believed there was more that could be done to further enhance the application of endoscopy as a diagnostic and treatment tool. His work in endoscopic video display and recording techniques ultimately resulted in improvements to endoscopic television cameras, which continue to become smaller in size as the result of current enhancements to these tools.

Through Dr. Berci’s work in illumination, contrast, clarity, and image recording, the creation of instruments for use in endoscopy expanded. In the late 1960s, new versions of the cystoscopes, resectoscopes, and nephrosopes used in urologic surgery had a major impact on how operations in that specialty were practiced. Furthermore, the field of pediatric endoscopy was initiated as a result of the miniaturized equipment that Dr. Berci was instrumental in creating. Pediatric endoscopy was used in examining, diagnosing, documenting, and treating diseases requiring surgical treatment in pediatric patients. As a result of working with this miniaturized equipment in infants, Dr. Berci, along with Stephen Gans, MD, FACS, became the first to document a tracheoesophageal fistula in living infants. His work in developing instruments also included the development of an improved laparoscope, the telescoposcope for adults and pediatrics, the modern rigid choledochoscope, and the indirect laryngoscope (which he developed with Paul Ward, MD, FACS), and a new video operative laryngoscope for ear nose and throat patients with Edward Kantor, MD FACS. Dr. Berci also introduced a combined suction-coagulation cannula, which, along with the improved laparoscope and other tools, made it easier to perform laparoscopic procedures.

Even now, more than 50 years after his initial ardor regarding endoscopy began, Dr. Berci continues his work in expanding the marriage of surgery and technology. His recent efforts have included the conception, creation, and utilization of an enhanced endoscopic means of intubation for use in patients with particularly difficult airways (with Marshal B. Kaplan, MD; Carin A. Hagberg, MD; and Denham S. Ward, MD, PhD), and exploring the use of the latest electronic technology for improving the imaging and viewing capabilities of endoscopes.

In addition to researching and administering all of these technology-based developments in endoscopy, Dr. Berci also taught. A renowned lecturer, he has led hundreds of seminars, courses, training sessions, conferences, teleconferences, and meetings. He has written 12 books, more than 200 scientific papers, 76 book chapters, and has produced nearly 42 teaching films.

Dr. Berci was a founding member of the International Biliary Association, now known as the International Hepato-Pancreato-Biliary Association, and is a past-president of the Society of American Gastrointestinal Endoscopic Surgeons (SAGES). Additionally, his professional accomplishments provided the inspiration for the SAGES George Berci Lifetime Achievement Award in Endoscopic Surgery.
The Clinical Trials Methods (CTM) Course was established in 1997 by the late Olga Jonasson, MD, FACS, and Timothy J. Eberlein, MD, FACS, Editor-in-Chief of the Journal of the American College of Surgeons, in conjunction with the late Shukri Khuri, MD, and William Henderson, PhD. The course was modeled after a similar course offered by the U.S. Department of Veterans Affairs (VA) office of research in collaboration with the VA Cooperative Study Program (CSP). The VA course was offered to VA faculty and was funded by their respective institutions. Each participant was nominated and supported by their respective chief and facility director, and was accepted into the course on competitive grounds based on qualifications and availability, taking into consideration geographic distribution of course participants.

The vision, enthusiasm, and dedication of Drs. Jonasson, Eberlein, Khuri, and Henderson allowed for the VA experience represented by Drs. Khuri and Henderson to be translated into a course designed specifically for the American College of Surgeons (ACS). It is this same energy and collaboration among Drs. Jonas-
son, Khuri, and Henderson and many of the faculty participants in the CTM Course that started the ACS National Surgical Quality Improvement Program (ACS NSQIP®), as a mirror image of the VA NSQIP, through the Study in Patient Safety funded by the Agency for Healthcare Research and Quality.*

The first course was chaired by Dr. Eberlein and took place in 1997 at the Westfields International Conference Center in Chantilly, VA. The course was repeated in 1999, and every year afterward until 2003. With the introduction of the outcomes course in 2004, the CTM course was offered every other year starting in 2005, alternating with the outcomes course. This year, the course is scheduled for December 2–6. The course currently takes place at the ACS headquarters in Chicago, IL.

Dr. Eberlein chaired the course until 2000, at which point Robin McLeod, MD, FACS, took over until 2005. I have had the privilege of being the Course Chair since 2007.

Mary Fitzgerald, an ACS staff member, was the course coordinator beginning in 2002 until she retired in 2010. Alexandra Marchel has taken over and is coordinating all preparations for the course in December.

Course overview

The course is limited to 50 participants and takes place in the fall, in November or December of every other year (odd year), and, as previously stated, alternates with the outcomes course. Participants are largely composed of staff surgeons from all surgical specialties, along with the occasional fellow and/or residents.

The course is designed to take place over the course of five days covering a weekend and consists of a didactics and hands-on approach to a prospective randomized clinical trial.

Before noon, over the course of four days, didactics are covered by faculty members in various areas of clinical trials methodology (see table, this page). In the afternoon, the students are divided into groups of eight or nine based on areas of common interest, with one faculty surgeon and biostatistician assigned to each group. Over the course of four afternoons, each team selects a topic, performs an extensive review of the literature, and develops a full clinical trial proposal, including a budget. The faculty surgeon and biostatistician serve as advisors throughout the course of each afternoon. On the evening of the fourth day, the proposals are circulated to all the students and faculty for review in preparation for the


**Other faculty participants in courses from 1997 to 2007 include the following: Brent Blumenstein, PhD; Henri Buchwald MD, FACS; Raphael Bueno, MD, FACS; Timothy Eberlein, MD, FACS; Aaron Fink, MD, FACS; Mary P. Fitzgerald, MD, FACS; Lawrence Friedman, MD, FACS; Stephen George, PhD; Sylvan Green, MD; John Henderson, MB, CHB, FACS; Robert Hobson, MD, FACS; Olga Jonasson, MD, FACS; John Kestle, MD; Shukri Khuri, MD, FACS; George Lundberg, MD; Robin McLeod; Jonathan Meakins, MD, FACS; Michael Mulholland, MD, FACS; Leigh Neumayer, MD, FACS; Reza Rostami, PhD; Valerie Rusch, MD, FACS; Gulshan Sethi, MD, FACS; David Sugarbaker, MD, FACS; Larissa Temple, PhD; Lee Wilke, PhD; Ian Witterick, MD; and Robert Woolson, PhD.
last day of the course. On that last
day, each team gives a 10-minute
PowerPoint presentation followed
by a 15-minute discussion. After
each presentation, the faculty goes
into recess, critiques the proposals,
and scores them. Proposals are also
scored by the students based on the
NIH scale. At the end of the session
on the fifth day, an overall score,
faculty score, and student score are
tallied and presented in conjunc-
tion with the critiques from the
faculty. Needless to say, the groups
go out of their way to perfect their
written and oral presentations
in order to compete for the best
possible scores. In addition, this
educational and review process has
allowed for the development of long-
lasting relationships among
students and faculty, that have, in
turn, led to the development and
funding of other proposals.

Assessment of CTM Course
In order to determine the im-
pace of the CTM Course on
participants’ research involvement
and success in research, a survey
was administered to all past par-
ticipants of this course.

The survey was designed with
input from all the CTM Course
faculty participating in the 2009
course. The survey looked specific-
ally at the following areas:
• Participation in clinical tri-
als, level of participation, type of
funding
• Current academic position
• Type of research currently
conducted
• Time commitment to re-
search
• Impact of the course on
participants (research, academics,
interpretation of literature, and
so on)

— Barriers encountered in pur-
suing surgical research

The survey was sent electroni-
cally in 2010 to all participants in
CTM Courses conducted between
1997 (the year of the inaugural
course) and 2007.

In all, 345 students participated
in the eight courses conducted
between 1997 and 2007 (with
an average of 43 students per
year). A total of 314 electronic
addresses were known, with a total
of 15 failed message transmissions,
due to incorrect or outdated e-mail
addresses. In all, 14 past
participants opted out of the
survey, for a total of 284 available
past participants who participated
in the survey. (A follow-up e-mail
was sent to those who did not
respond initially.)

The total number of respon-
dents was 90 (31.7 percent). Re-
spondents were evenly distributed
among the years with the excep-
tions of 1997 and 2005, which
had five and four respondents,
respectively.

The results of the survey—based
on the seven areas addressed in the
questionnaire—are very telling
and are outlined in the following
bullet points:
• Participation in clinical trials,
level of participation, and type of
funding:
—61 percent of respondents re-
ceived NIH or other peer-reviewed
funding for a clinical trial (40
percent of those were principal
investigator)
—63 percent participated in an
industry-sponsored trial
—50 percent were investigators
in a non-funded trial
—48 percent published the
results of their trial in a peer-
reviewed journal
—5 percent did not pursue
clinical trials
• Current academic position of
past participants:
—84 percent of respondents
are affiliated with an academic
practice (University Hospital, VA)
—10 percent are in private prac-
tice with a university affiliation
—6 percent are in private prac-
tice with no academic affiliation
• Type of research currently
conducted by past participants:
—77 percent of respondents
stated that they perform clinical
trials or other type of clinical
research
—30 percent are involved in
translational research
—29 percent are in healthservices/
outcomes research
—23 percent are involved in
educational research
—21 percent are involved in
basic science research
• Time commitment to research:
—80 percent of respondents
spend more than 50 percent of
their time in research
—52 percent spend between
10 and 30 percent of their time
in research
—40 percent spend less than 10
percent of their time in research
• Impact of the course on par-
ticipants:
—For 81 percent of the partici-
pants, the CTM Course fostered
an interest and facilitated involve-
ment in clinical trials. For at least
two-thirds of the respondents,
the course helped in establishing
a network of experts and collabor-
ative relationships and assisted
in a better interpretation of the
literature. Seventy-seven percent
have recommended the course to
others.
—A total of 12 (13 percent) of
respondents decided that clinical trials were too complex (five respondents), were of little use in their career (five respondents) or that the course did not meet their expectations (two respondents).

- **Barriers encountered in pursuing surgical research:**
  - Inadequate protected time (79 percent) and excessive clinical demands (77 percent) were the most common barriers to pursuing research. Other factors included lack of mentorship (36 percent), inadequate support (30 percent), and lack of appropriate collaborators (15 percent).

- **Comments received:**
  - Many positive comments were received, while a few negative comments dealt with the complexity of trials, the statistical portion, barriers to research, and the need for experienced personnel.

  Although the response rate to the survey was low, it was not different from response rates to similar surveys. Based on the responses obtained, the CTM Course provided participants with an opportunity to become involved in clinical trials, obtain funding, and publish in that area. Barriers consist of the usual lack of protected time, support, and complexity of this type of research.

**Present, future of CTM Course**

The course has constantly evolved to take into consideration past participants’ feedback. For example, two hours of basic statistics were added to the first day of the course—starting in 2009—based on participants’ suggestions. For seasoned participants, these sessions represented a review, and for those attendees with little statistical knowledge, they provided the building blocks for more advanced biostatistics presented throughout the course.

The faculty also decided that, starting in 2009, all didactics will be framed around four clinical trials published in the literature. Those trials are provided to participants ahead of the course, presented on the first day, and discussed at length throughout the course. This setup has provided a more tangible sense of some of the concepts presented by the faculty during the didactics.

In an era where the highest level of evidence is needed for improved outcome, quality, and cost-effectiveness, the CTM Course provides participants with the perfect opportunity to learn how to conduct credible and high-level comparative effectiveness research to reach such evidence. It is imperative that we, as surgeons, identify the areas in need of further investigation and conduct credible research in those areas. Funding of such research remains difficult, but the opportunities to conduct comparative effectiveness research and, specifically, clinical trials have never been better.

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Leading the charge in defense of the RUC

by Bob Jasak, Esq.; and Kristen Hedstrom, MPH

On April 6, the American College of Surgeons (ACS) and 47 other physician organizations sent a letter to all members of the House of Representatives to clarify the composition and role of the American Medical Association (AMA) Relative Value Scale Update Committee (RUC). The letter was in response to some representatives who incorrectly described and evaluated the RUC during a March 15 hearing of the House Ways and Means Subcommittee on Health.

The College followed with a letter of its own opposition to the Medicare Physician Payment Transparency and Assessment Act of 2011, H.R. 1256, introduced by Rep. Jim McDermott (D-WA). This legislation would require the Centers for Medicare & Medicaid Services (CMS) to employ the services of outside contractors to annually analyze potentially misvalued services and codes under the Medicare physician fee schedule.

The AMA RUC is a multispecialty expert panel that is designed to make informed annual decisions to CMS on the values of new and revised Current Procedural Terminology (CPT)* codes. The ACS holds the RUC seat assigned to general surgery. The remainder of the RUC consists of seats assigned to the following areas: anesthesiology, cardiology, cardiothoracic surgery, dermatology, emergency medicine, family medicine, internal medicine, neurology, neurosurgery, obstetrics/gynecology, ophthalmology, orthopaedic surgery, otolaryngology, pathology, pediatrics, plastic surgery, psychiatry, radiology, and urology. In addition, colon and rectal surgery, nephrology, and pulmonary medicine currently occupy the RUC’s rotating seats.

The College strongly believes the concerns that the subcommittee members have raised are unfounded, and that H.R. 1256 is unnecessary. CMS has consistently relied on the RUC’s work and recommendations in assigning values for physician services for the purposes of the fee schedule, and the CMS also participates in all RUC meetings. ACS participation in the RUC has contributed to the creation of a deliberative body that has helped to assess the relative complexity, intensity, and risk of physician services across specialties. The participation of the ACS has been rooted in the belief that the best-situated individuals to make those assessments are the physicians who provide these services across the country every day.

In addition to annual updates reflecting changes in CPT, section 1848(C)2(B) of the Omnibus Budget Reconciliation Act of 1990 requires CMS to comprehensively review all relative values at least every five years and to make any necessary adjustments. The success of the RUC’s role in the annual update process led CMS to seek assistance from the RUC for each of the three five-year reviews. After each review is completed, the Secretary of Health and Human Services and CMS review the RUC’s recommendations and then accept, modify, or reject any of the suggestions.

The College also opposes H.R. 1256 because the bill calls upon CMS to use independent contractors to have input on CPT codes, and, in fact, the agency has an unsuccessful history in this arena. In the late 1990s, CMS used a contractor to develop practice expense inputs for all physician services. When the process failed, the RUC stepped in to develop a new process with uniform standards and re-reviewed every service and cost input, resulting in the redistribution of practice expense payments to primary care. Another CMS contractor hired to obtain the overall practice costs of each specialty could not fulfill its contract and, in 2007, CMS relied on the AMA and national specialty societies to collect the cost information. In addition, the RUC assumed the responsibility of identifying potentially misvalued codes, when CMS, using contractors, failed in its attempt. To date, the RUC has identified more than 900 services and redistributed more than $1.5 billion.

No signs of bias

One common criticism of the RUC has been a purported bias toward nonprimary care specialties. However, the RUC does not
review primary care or any specific specialty in terms of relative value. Rather, the committee reviews the relative value of individual services that physicians perform—regardless of specialty. Even as Medicare payments for many physician services have steadily declined in the past two decades, the RUC has taken significant steps to improve reimbursement for services that primary care professionals perform, including the following:

- The RUC review of services in 1995, which included recommended increases for evaluation and management services, resulted in a shift of $2.7 billion, and net increases for family practice and internal medicine of 2.0 percent to 2.5 percent. Surgical specialties saw net decreases ranging from 1.0 percent to 5.5 percent.

- The third five-year review of work in 2005 resulted in the shifting of more than $4 billion to evaluation and management codes—which are largely provided by primary care practitioners—from other physician services in the 2007 Medicare physician fee schedule.

- The third five-year review also resulted in a 37 percent increase in the work values associated with an intermediate office visit (CPT 99213), the most frequently billed Medicare physician service for family practice and internal medicine physicians.

- Between 2006 and 2011, whereas Medicare payments for many physician services were reduced from 2006 levels for non-primary care physicians, Medicare payments to primary care have increased by 22.5 percent, according to the Medicare Payment Advisory Commission’s (MedPAC’s) most recent report.

Of the 22.5 percent increase to primary care, only 2.9 percent of that increase resulted from annual Medicare payment updates, while 19.6 percentage points were a result of the recommendations made by the RUC. This includes increases in preventive services such as the increase in immunization administration.

In addition, the RUC has provided a reasonable venue for the primary care community to voice the needs and interests of primary care professionals and their patients. Of note, each time a primary care organization has asked the RUC to assist and evaluate their requests, the RUC has, with few exceptions, provided the changes. For example:

- Although CMS has not yet implemented it, the RUC has ascribed a value to medical home services, in addition to the 22.5 percent increase to primary care.

- The RUC provided a value for observational care, which is principally provided by primary care.

- The RUC has also provided valued for telephone and team management services.

Some payment experts, including MedPAC, have suggested creating an additional RUC-like panel, which would include economists and laypersons, in addition to physicians, to make recommendations regarding particular physician services that are perceived to be overvalued. Another panel would not only be duplicative, but would add yet another bureaucratic layer to an already complicated process. In addition, the Secretary of Health and Human Services and CMS already enjoy considerable authority regarding the recommendations issued by the RUC and currently have the authority and ability to obtain input from economists and other individuals.

While no payment process is flawless, the College strongly believes the RUC exists to provide relative valuation of medical services. No other entity has the expertise to decide if a service provided is relatively more complex, relatively more intense, or relatively more risky than the collective deliberative panel of the RUC.

For more information on the activities of the Division of Advocacy and Health Policy, and to view the letters mentioned in this article, go to http://www.facs.org/ahp. If you have any further questions, contact Kristen Hedstrom at khedstrom@facs.org or Bob Jasak at bjasak@facs.org.

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We fight frivolous claims. We smash shady litigants. We over-prepare, and our lawyers do, too. We defend your good name. We face every claim like it’s the heavyweight championship. We don’t give up. We are not just your insurer. We are your legal defense army. We are The Doctors Company.

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Surgical education: Residents setting the example

by Glenn T. Ault, MD, FACS; and Diana C. Breda

The field of surgical education has seen dramatic changes in the last two decades as it moved away from apprenticeship models to other models of teaching and learning. Many external forces have also played a role in shaping the changes that have occurred. Accreditation Council for Graduate Medical Education competencies, duty hour requirements, and the increase in the number of technological advancements have all played a role in how residency programs have had to change their curriculum to adapt to meet new demands placed upon educators.

The American College of Surgeons (ACS) aims to promote excellence in surgical education. An exemplary residency program encourages the utilization of a variety of adult learning techniques to impart knowledge, not only to residents, but to students as well. In any profession, there are those who not only aspire to obtain success for themselves, but who also devote their energies toward assisting the next level of learners to reach their own potential. Within each class of residents, a few will stand out as true educators. It is this group that the ACS Division of Education recognizes each year with the Resident Award for Exemplary Teaching.

This award—launched in 2003—is presented each year to one recipient in order to recognize excellence in teaching by residents. Teaching efforts can be directed toward medical students, fellow residents, or other allied health personnel. Eligible residents are nominated by the chair or program director of their surgical program. Each program may only nominate one resident per year.

The nominees for this award have typically received prior recognition of their outstanding efforts in teaching by winning teaching awards at their current institution. This fact alone means that the nominees are all exemplary teachers. The Committee on Resident Education has the difficult task of reviewing the applications of these highly qualified individuals to determine the recipient of each year’s award.

The recipient is awarded a monetary stipend, as well as an invitation to attend the Clinical Congress as a guest of the College. The top nine follow-up nominees are also recognized with a certificate of outstanding merit. Only one winner is recognized formally at the Clinical Congress each year; therefore, the outstanding accomplishments of all of the applicants are sometimes only known to the committee. The following are some of the highlights of those candidates’ contributions to resident education. In particular, recent candidates have clearly demonstrated excellence in teaching and have set the bar high for those individuals who follow.

Academic institutions

The 2009 and 2010 applicants for the Resident Award for Exemplary Teaching came from a prestigious list of academic institutions. As undergraduates, they studied at schools such as University of California, Berkeley; University of Pennsylvania, Philadelphia; Stanford University, Stanford, CA; and Georgetown University, Washington, DC, to name just a few. The applicants’ undergraduate degrees were in the expected pre-med subjects such as biochemistry, biology, physics, and chemistry, but the degrees also included more unusual areas of undergraduate study, such as Spanish, music history and theory, environmental studies, economics, and Asian studies.

For medical school, these high-achievers attended institutions such as University of Pennsylvania; University of California, Los Angeles (UCLA); Columbia University, New York, NY; University of Michigan, Ann Arbor; Jefferson Medical College, Philadelphia, PA; Johns Hopkins University, Baltimore, MD; Brown University, Providence, RI; University of Chicago, IL, as well as several universities located outside the U.S. Virtually all of the applicants stood out in medical school as intelligent, ambitious students who would go on to shape the future of medicine with their research interests and wide variety of residency matches.

In addition to their medical degrees, several of the applicants had earned other advanced degrees, including masters in education, masters in public health, and a doctorate degree in public health.

AUGUST 2011 BULLETIN OF THE AMERICAN COLLEGE OF SURGEONS
The residency programs represented by this talented group of applicants included Brigham and Women's Hospital at Harvard University, Boston, MA; Penn State Milton S. Hershey Medical Center, Hershey, PA; University of Iowa, Iowa City, IA; Mount Sinai School of Medicine in New York, NY; UCLA, Johns Hopkins University; University of South Carolina, Columbia; University of Chicago; McGill University, Montreal, PQ; Stanford University; and Wake Forest University, Winston-Salem, NC, among others. Their PGY levels at the time these residents submitted their applications ranged from 3 to 7. Each applicant was highly recommended by his or her chair or program director.

Awards and achievements

In order to be nominated for the Resident Award for Exemplary Teaching, each nominee must have received at least one teaching award from their own institution. Therefore, it goes without saying that these applicants had already been recognized for their outstanding teaching—and a few of these applicants had received multiple awards at all levels of their academic careers. Other teaching awards earned by this group included the following: the Excellence in Teaching award at Tufts School of Medicine; the Lecturer of the Year Award from the University of Denver (department of physics); the Robert Baker Golden Apple Teaching Award granted by the University of Chicago Medical Center, Department of Surgery in Chicago; Alpha Omega Alpha Honor Society for Outstanding Teaching; the String of Pearls Teaching Award for Compassion, Humanism and Dedication to Teaching granted by Georgetown University School of Medicine in Washington, DC; and the Arnold P. Gold Foundation Humanism and Excellence in Teaching Award—granted by the University of Chicago Medical Center; Stanford University, Palo Alto, CA; and the University of Iowa Carver College of Medicine, Iowa City—among others.

In addition to accolades for their teaching abilities, these nominees earned many other awards for their leadership and academic excellence. A partial list includes the following: the Anne C. Carter Leadership Award granted by the American Medical Women's Association in Philadelphia, PA; the American Medical Association (AMA) Foundation Leadership Award granted by the AMA in Chicago, IL; the Resident Teacher of the Year award from American University of the Caribbean School of Medicine, St. Maarten, Netherlands Antilles; Phi Beta Kappa, from Ursinus College in Collegeville, PA, and the University of Pennsylvania; the Zuckerman Fellowship, from Harvard University, Cambridge, MA; New York Society of Colon and Rectal Surgeons Award issued in New York, NY; and the Chairman's Award for Excellence in Teaching from Johns Hopkins University.

It is difficult to convey the commitment and dedication that these individuals have devoted to resident education at the same time they are completing their own graduate medical education. It is noteworthy to mention just a few of the curriculum enhancements to both medical school rotations and residency programs developed by these applicants. Titles of surgical rotation topics included How to Survive and Thrive during Your Surgery Rotation, and Become a Liaison between Medical Students and Residents. Another candidate created a program for high school students taking AP biology entitled Surgery Live!, which shows the students a live surgery via an interactive webcast. The goal of this program is both to teach the students anatomy and physiology as well as highlight potential careers in health care professions.

One talented applicant designed a website for both the general surgery and cardiothoracic surgery programs at his institution. Another nominee served as a flight surgeon for the U.S. Navy.

Additional curricular enhancements to surgical education developed and implemented by this group of applicants included the following: multiple contributions to improve the surgical skills lab at their institutions, Fundamentals of Laparoscopic Surgery course, basic science conference, new surgical core curriculum design, introductory lectures for surgical clerkships, and an ethics in surgery program.

Research and publishing are critical components to any dossier, and these applicants have far too many poster presentations and published articles to list in this article. Some of the research areas for this pool of applicants included topics ranging from how to improve surgical education programs, to breast simulators, to vascular trauma, to Spanish for medical students, and everything in between. Clearly these inquisitive and ambitious researchers
have made numerous contributions to medicine in their young careers, and we can expect much more from them in the future.

**Rising educators**

It is obvious from the long list of accomplishments demonstrated by the 2009 and 2010 nominees for the Resident Award for Exemplary Teaching that the future of medical education at all levels is in good hands with these academic clinicians. Their commitment to teaching the next generation of medical students and residents is evident in all aspects of their academic careers to date. We can expect great improvements in our residency programs as these young surgeons enter our medical schools and hospitals as the new leaders of the profession. It is a worthy endeavor to honor resident educators each year with this award.

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**The United States Atlas of the Surgical Workforce**

- Interactive maps of the ratio of surgeons to population
- County-level and state-level ratios
- Rural-urban comparisons

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2011 COT Residents Trauma Papers Competition winners announced

The Committee on Trauma (COT) announced the winners of the 34th annual Residents Trauma Papers Competition at its annual meeting in Washington, DC. The competition is open to surgical residents and trauma fellows. Submissions describe original research in the area of trauma care and/or prevention in one of two categories: basic laboratory research or clinical investigation. The competition is funded by the Eastern and Western States COTs, Region 7 (Iowa, Kansas, Missouri, and Nebraska), the National Trauma Institute, and the American College of Surgeons.

Submissions begin at the state or provincial level, and winners are then judged at regional competitions. Each region is then eligible to submit two abstracts to a panel of COT judges, who make the final selection for presentation at the Scientific Session of the COT meeting.

This year, 14 presentations were given at the session, which was moderated by Raul Coimbra, MD, PhD, FACS, Vice-Chair of the COT and Chair of the COT Regional Committees. Each of the 14 presenters received a prize of $500, with an additional $500 awarded to the second-place winners in each category, and an extra $1,000 awarded to the two first-place winners.

The presentations were given by these winners from the following COT regions: George Kasotakis, MD, Boston, MA (Region 1); Marlene Mathews, MD, PhD, Rochester, NY (Region 2); Matthew D. Neal, MD, Pittsburgh, PA (Region 3); Levi D. Procter, MD, Lexington, KY (Region 4); Nathan M. Mollberg, DO, Chicago, IL (Region 5); Laura E. White, MD, Houston, TX (Region 6); Christopher S. Nelson, MD, Columbia, MO (Region 7); Max V. Wohlauer, MD, Denver, CO (Region 8); Yan T. Ortiz-Pomales, MD, San Diego, CA (Region 9); Colin Kazina, MD, BSc (Med), Winnipeg, MB (Region 11); Michael Crozier, MD, St. John's, NL (Region 12); Captain Shaun M. Gifford, MD, MSc, San Antonio, TX (Region 13); Juan Camilo Correa Cote, MD, Medellin, Colombia (Region 14); and Banjerd Praditsuktavorn, MD, Bangkok, Thailand (Region 16).

The 2011 final winners are as follows:

- **First Place, Basic Laboratory Research:** Laura E. White, MD, Houston, TX (Region 6): TNFR-1-Dependent NF-κB Activation and Pulmonary Apoptosis During Ischemic Acute Kidney Injury.
- **First Place, Clinical Investigation:** Levi D. Procter, MD, Lexington, KY (Region 4): Acute Care Surgery Is a Profitable Service Line in an Appropriately Staffed Hospital.
- **Second Place, Basic Laboratory Research:** Marlene Mathews, MD, PhD, Rochester, NY (Region 2): Multisystem Trauma Patients Who Develop Venous Thromboembolism Have Increased Numbers of Circulating Microparticles.
Faculty research fellowships offered for 2012–2014

The American College of Surgeons is offering two-year faculty research fellowships, through the generosity of Fellows, chapters, and friends of the College, to surgeons entering academic careers in surgery or a surgical specialty. The fellowship award is $40,000 per year for each of the two years, and is intended to assist a surgeon in the establishment of a new and independent research program. Applicants are required to demonstrate their potential to work as independent investigators.

Faculty Research Fellowships are sponsored by the Scholarship Endowment Fund of the College. The Franklin H. Martin, MD, FACS, Faculty Research Fellowship honors the founder of the College. The C. James Carrico, MD, FACS, Faculty Research Fellowship for the Study of Trauma and Critical Care honors the late Dr. Carrico.

The Louis Argenta, MD, FACS, Faculty Research Fellowship, supported by Kinetic Concepts, Inc., is a one-year award in the amount of $40,000 to help a surgeon establish an independent research program on wound care. All of the requirements outlined in this article that apply to the Martin and Carrico Fellowships apply to the Argenta Fellowship—with the exception that the time period is for one year. The Argenta Fellow will attend and report at the 2013 Clinical Congress.

General policies covering the awarding of the American College of Surgeons Faculty Research Fellowships are:

- The fellowship is open to Fellows or Associate Fellows of the College who have: (1) completed the chief residency year or accredited fellowship training within the preceding three years; and (2) received a full-time faculty appointment in a department of surgery or a surgical specialty at a medical school accredited by the Liaison Committee on Medical Education in the United States or by the Committee for Accreditation of Canadian Medical Schools in Canada. Preference will be given to applicants who directly enter academic surgery following residency or fellowship.
- This award may be used by the recipient for support of his or her research or academic enrichment in any fashion that the recipient deems maximally supportive of his or her investigations. The fellowship grant is to support the research of the recipient and is not to diminish or replace the usual, expected compensation or benefits. Indirect costs are not paid to the recipient or to the recipient’s institution.
- Application for this fellowship may be submitted even if comparable application has been made to organizations such as the National Institutes of Health (NIH) or industry sources. If the recipient is offered a scholarship, fellowship, or research career development award from such an agency or organization, it is the responsibility of the recipient to contact the College’s Scholarships Administrator to request approval of the additional award. The Scholarships Committee reserves the right to review potentially overlapping awards and adjust its award accordingly.
- The College encourages the applicant to leverage the funds provided by this fellowship with time and monies provided by the applicant’s department. Formal statements of matching funds and time from the applicant’s department will promote favorable review by the College.
- Supporting letters from the head of the department of surgery (or the surgical specialty) and from the mentor supervising the applicant’s research effort must be submitted. This approval would involve a commitment to continuation of the academic position and of facilities for research. Only in exceptional circumstances will more than one fellowship be granted in a single year to applicants from the same institution.
- The applicant must submit a research plan and budget for the two-year period of fellowship, even though renewed approval by the Scholarships Committee of the College is required for the second year.
- A minimum of 50 percent of the Fellow’s time must be spent in the research proposed in the application. This percentage may run concurrently with the time requirements of NIH or other accepted funding.
- The Fellow is expected to attend the Clinical Congress of the American College of Surgeons in August 2011 Bulletin of the American College of Surgeons
2014 to present a report at the Surgical Forum and to receive a certificate at the annual meeting of the Scholarships Committee.

The closing date for receipt of applications and all supporting documents is November 1, 2011. Application forms may be obtained from the College’s website: http://www.facs.org/memberservices/acsfaculty.html.

ANZ Traveling Fellowship for 2013 announced

The International Relations Committee of the American College of Surgeons (ACS) announces the availability of the Australia and New Zealand (ANZ) Traveling Fellowship. The purpose of this fellowship is to encourage international exchange of surgical science, practice, and education, and to establish professional and academic collaborations and friendships.

Basic requirements

The scholarship is available to a Fellow of the ACS, in most of the surgical specialties, who meets the following requirements:

- Has a major interest, and accomplishment, in basic sciences related to surgery
- Holds a current full-time academic appointment in the U.S. or Canada
- Is under 45 years of age on the date the application is filed
- Is enthusiastic, personable, and possesses good communication skills

Activities

The Fellow is required to spend a minimum of two or three weeks in Australia and New Zealand, and to engage in the following activities:

- Attend and participate in the annual Scientific Congress of the Royal Australasian College of Surgeons, in Auckland, New Zealand, May 6–10, 2013
- Participate in the formal convocation ceremony
- Attend and address the ANZ Chapter meeting
- Visit at least two medical centers in Australia and New Zealand to lecture, and to share clinical and scientific expertise with the local surgeons

The academic and geographic aspects of the itinerary would be finalized in consultation and mutual agreement between the Fellow and the President or designated representative of the Australia and New Zealand Chapter of the ACS. The surgical centers selected for a visit would depend, to some extent, on the special interests and expertise of the Fellow and his or her previously established professional contacts with surgeons in Australia and New Zealand.

His or her spouse is welcome to accompany the chosen applicant. There will be many opportunities for social interaction, in addition to professional activities.

Financial support

The College will provide $8,000 to the chosen applicant, who will also be exempted from registration fees for the annual Scientific Congress. He or she must meet all travel and living expenses. Senior chapter representatives will consult with the Fellow about the centers to be visited in Australia and New Zealand, the local arrangements for each center, and other advice and recommendations regarding travel schedules. The Fellow is urged to make his or her own travel arrangements in North America, due to the likely availability of reduced fares and packages for travel in Australia and New Zealand.

The ACS International Relations Committee will select the Fellow after reviewing and evaluating the final applications. A personal interview may be requested prior to the final selection.

Applications for this traveling scholarship may be obtained from the College’s website, http://www.facs.org/memberservices/research.html, or by writing to the International Liaison, American College of Surgeons, 633 N. Saint Clair St., Chicago, IL 60611-3211.

The closing date for receipt of completed applications is November 15, 2011. The successful applicant, and an alternate, will be selected and notified by March 2012.
A look at The Joint Commission

Robust Process Improvement™ at The Joint Commission

In April 2008, The Joint Commission embarked on a long-term initiative to dramatically improve the efficiency of its internal operations, increase customer satisfaction, and enhance the overall quality of its products and services. The Joint Commission uses Robust Process Improvement, or RPI, to accomplish these goals. RPI is a unique blend of tools, including Lean Six Sigma and change management, which have been successfully used to create near-perfect processes with very high sustained levels of quality and safety over long periods of time in industries such as nuclear power and commercial aviation. The Joint Commission Center for Transforming Healthcare also uses RPI methodologies externally in health care to develop solutions for its projects, which can be read about in more detail in the December 2010, January 2011, April 2011, and May 2011 issues of the Bulletin.

RPI provides a fact-based, systematic, and data-driven problem-solving framework to uncover the specific risk points and factors that contribute to failures in quality and safety. Once the causes of failures are identified, solutions can then be developed and targeted to those specific causes.

A primary goal of The Joint Commission’s RPI deployment is to embed its use within the daily work of the organization. One of the many strengths of RPI is the combination of technical proficiency in data-driven problem solving (through tools such as Lean Six Sigma) with the capability of formal change management practices. The combination of Lean Six Sigma with change management underscores the fact that a great technical solution is often not enough to maximize the effectiveness of the recommended change or to sustain the change. Recognizing the needs and the ideas of the people who are part of the process and are charged with implementing a new solution is important in building acceptance and accountability.

To accomplish the internal adoption of RPI, The Joint Commission developed an aggressive training program that features classroom learning alongside the practical application of RPI tools on specific projects that are selected by leadership. Since 2008, 120 Joint Commission employees have received in-depth training in RPI. An additional 39 employees are being trained in 2011 as part of the “fourth wave” of training.

Beginning in 2010, a series of in-person and online courses were made available to staff who want to attain general RPI education and competency. Many RPI projects have subsequently taken place within The Joint Commission to improve the organization’s process and, in turn, benefit customers.

For example, one of the first projects that incorporated RPI training for staff revolved around the need to improve the consistency of standards interpretation. After working through the steps of RPI to systematically assess the variations in standards interpretation, a group of employees trained in RPI created and implemented a solution that provides consistent standards interpretation information to customers. The solution, a Standards BoosterPak, provides a single authoritative source of additional information on specific standards that have inconsistently been interpreted in the past.

Other internal RPI projects that have used RPI education include tasks ranging from reducing standards cycle time to working toward eliminating last-minute flight scheduling changes. The latter has helped save a considerable amount in travel costs for The Joint Commission.

The Joint Commission will continue to work toward its commitment to use RPI tools, internally and externally, in an effort to achieve high reliability in health care.

For more information about RPI, visit http://www.jointcommission.org/dont_just_talk_the_talk/.
NTDB® data points

One hundred more or less

by Richard J. Fantus, MD, FACS

The NTDB data points column titled “One hundred” in last month’s issue of the Bulletin (Bull Am Coll Surg. 2011;96(7):67-68) focused on the ever-increasing subset of trauma patients who are 65 years and older presenting to trauma centers. Elderly injury patients arrive at trauma centers often as a result of local, regional, or state field trauma triage criteria. At the scene of an injury, emergency medical services (EMS) providers assess the situation using a decision process known as field triage, which identifies patients who may have serious injuries and helps EMS teams determine the most appropriate facility for transport. The first Field Triage Decision Scheme was published by the American College of Surgeons (ACS) in 1986, and subsequently updated in 1990, 1993, and 1995.

Decision schemes involve a stepwise assessment of the injured patient. The first step involves evaluating the patient’s altered physiology (including systolic blood pressure, extremes of respiratory rate, Glasgow coma scale), followed by an evaluation of anatomic injury patterns (such as penetrating head/neck/torso, flail chest, pelvic fractures). The next step in the decision scheme involves evaluating the mechanism of injury (such as a high-risk auto crash with intrusion and/or ejection related trauma, or falls from height).

In 2005, the Centers for Disease Control and Prevention, in partnership with the ACS Committee on Trauma, and with the support of the National Highway Traffic Safety and Transportation Administration, facilitated revisions of the decision scheme through a series of meetings conducted by a national expert panel. One criteria from the previous decision model that was reviewed by the panel was age as a consideration for transport to a trauma center, particularly if there were no other indications for such action after evaluating for physiologic, anatomic, and mechanism of injury criteria. During that process it was concluded—based upon evidence from review of the relevant literature—that advanced patient age should lower one’s threshold for transporting the patient directly to a trauma center.

The current 2006 Field Triage Decision Scheme has been endorsed by 17 professional organizations, including the American College of Emergency Physicians, the American Medical Association, the American Public Health Association, the National Association of EMS Physicians, and the National Association of

In order to examine the impact of initial field systolic blood pressure on trauma patients age 65 and older in the National Trauma Data Bank® research dataset 2009, admissions records were searched by the field for age greater than or equal to 65. These records were then divided into three groups (Group 1: <90 mmHg, Group 2: 90-99 mmHg, Group 3: ≥ 100 mmHg) based upon their initial recorded field systolic blood pressure.

A total of 76,789 records had age greater than or equal to 65 and a recorded field systolic blood pressure. In all, 70,813 records had discharge status recorded, including 24,268 discharged to home, 12,171 to acute care/rehab, 29,594 to nursing homes; 4,780 died. These patients were 59 percent female, on average 79.68 years of age, had an average length of stay of 6.38 days, and an average injury severity score of 10.55. The mortality for the three groups evaluated were 17.29 percent for Group 1, 10.06 percent for Group 2, and 5.85 percent for Group 3. (See figure, page 76.)

The physiologic criteria in the current triage decision scheme uses a field systolic blood pressure of less than 90 mmHg regardless of age. When comparing Group 2 (initial field systolic blood pressure between 90-99 mmHg) with Group 3 (initial field systolic blood pressure ≥ 100 mmHg), there is almost a two-fold increase in mortality. This two-fold increase in mortality was also reported in last month’s *Bulletin* article, which looked at initial emergency department systolic blood pressure of less than 100 mmHg. It appears that the number 100, more or less, has a direct bearing on survival if you are 65 years or older and involved in a traumatic event.

Throughout the year, we will be highlighting data through brief reports that will be found monthly in the *Bulletin*. The NTDB Annual Report 2010 is available on the ACS website as a PDF file and a PowerPoint presentation at http://www.ntdb.org. In addition, information is available on our website about how to obtain NTDB data for more detailed study. If you are interested in submitting your trauma center’s data, contact Melanie L. Neal, Manager, NTDB at mneal@facs.org.

**Acknowledgment**

Statistical support for this article has been provided by Chrystal Price, data analyst, NTDB.

**Dr. Fantus** is director, trauma services, and chief, section of surgical critical care, Advocate Illinois Masonic Medical Center, and clinical professor of surgery, University of Illinois College of Medicine, Chicago, IL. He is Past-Chair of the ad hoc Trauma Registry Advisory Committee of the Committee on Trauma.
To report your chapter’s news, contact Rhonda Peebles toll-free at 888-857-7545, or via e-mail at rpeebles@facs.org.

**Update from the Oregon Chapter**

The Oregon Chapter conducted its Legislative Symposium March 13–14 in Salem. Designed to build and enhance members’ knowledge, skills, and enthusiasm for legislative advocacy, the Legislative Symposium featured Brian Boehringer from the Oregon Medical Association, and state Rep. Val Hoyle (D). In addition, Charlotte Grill, American College of Surgeons (ACS) State Affairs Associate, Division of Advocacy and Health Policy, presented and helped plan the meeting. The Oregon Chapter was a recipient of an ACS advocacy grant in 2010.

In addition, the chapter issued a couple of important announcements. First, members are able to stay up-to-date on their chapter’s activities by reading the chapter’s new online newsletter at http://www.oregonchapteracs.org/newsletter/newsletter.html. The other announcement was in response to a request from the Oregon Health Services Commission to help review the prioritized list of health services used by the state health plan, and the following chapter members volunteered to assist in this effort: Erik Swensson, MD, FACS, and Laurel Soot, MD, FACS (general surgery); Dan Herzig, MD, FACS, and John Handy, MD, FACS (cardiovascular surgery); Leon Assail, MD, FACS (oral maxillofacial surgery); and Greg Landry, MD, FACS (vascular surgery). John Mayberry, MD, FACS, noted that a plastic surgeon is still needed for the review; Dr. Mayberry can be reached at 503-494-5300, or via e-mail at mayberrj@ohsu.edu.

**Connecticut Chapter hosts first meeting for Connecticut Surgical Quality Collaborative**

On May 3, the Connecticut Chapter of the American College of Surgeons Professional Association (CTACSPA) held the inaugural meeting of the Connecticut Surgical Quality Collaborative (CtSQC), a CTACSPA initiative. The event brought together surgical chairs and quality leaders from 13 hospitals, which together comprise approximately 70 percent of the surgical discharges across the state. The meeting was kicked off by a presentation, via teleconference, with David Hoyt, MD, FACS, ACS Executive Director. Dr. Hoyt discussed the College’s quality improvement mission and spoke about the existing quality
collaboratives in the U.S. The CtSQC is poised to be the third largest quality collaborative in the country behind Florida and Michigan. For more information about CtSQC, contact Christopher Tasik, Executive Director, at 203-674-0747, or via e-mail at info@CTACS.org.

**Capitol Hill visits focus of spring activities**

ACS members headed to their state capitols for visits with legislators to advocate for patient safety and professional liability reform. In Connecticut, ACS members joined with the Connecticut State Medical Society and the Connecticut-based affiliate of the

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### Chapter meetings

For a complete listing of the ACS chapter education programs and meetings, visit the ACS website at [http://www.facs.org/about/chapters/index.html](http://www.facs.org/about/chapters/index.html).

(AP) following the chapter name indicates that the ACS is providing AMA PRA Category 1 Credit™ for this activity.

<table>
<thead>
<tr>
<th>Date</th>
<th>Chapter</th>
<th>Location/Information</th>
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<tbody>
<tr>
<td>September 10, 2011 - September 11, 2011</td>
<td>Kansas (AP)</td>
<td>Location: Doubletree Hotel, Overland Park, KS</td>
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<tr>
<td></td>
<td></td>
<td>Contact: Gary Caruthers, 785-235-2383, e-mail: <a href="mailto:gcaruthers@kmsonline.org">gcaruthers@kmsonline.org</a></td>
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<td></td>
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<td>ACS Representative(s): Mark A. Malangoni, MD, FACS</td>
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<td>September 17, 2011</td>
<td>Maryland (AP)</td>
<td>Location: Baltimore Intercontinental Hotel, Baltimore, MD</td>
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<td></td>
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<td>Contact: Jennifer Starkey, 877-904-1915, e-mail: <a href="mailto:maryland@marylandfacs.org">maryland@marylandfacs.org</a></td>
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<td>ACS Representative(s): Charles D. Mabry, MD, FACS</td>
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<tr>
<td>September 17, 2011</td>
<td>Arkansas (AP)</td>
<td>Location: Jackson T. Stephens Spine and Neurosciences Institute, Little Rock, AR</td>
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<td>Contact: Linda Clayton, 501-753-3500, e-mail: <a href="mailto:lindac92@comcast.net">lindac92@comcast.net</a></td>
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<tr>
<td>October 14, 2011</td>
<td>Kentucky (AP)</td>
<td>Location: Boone Faculty Center, Lexington, KY</td>
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<td></td>
<td>Contact: Linda Silvestri, 859-323-6346, e-mail: <a href="mailto:lsilv2@uky.edu">lsilv2@uky.edu</a></td>
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<tr>
<td>November 03, 2011 - November 05, 2011</td>
<td>Connecticut</td>
<td>Location: Holiday Inn, Waterbury, CT</td>
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<td>Contact: Chris Tasik, 203-674-0747, e-mail: <a href="mailto:info@CTACS.org">info@CTACS.org</a></td>
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<tr>
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<td>ACS Representative(s): L.D. Britt, MD, MPH, FACS</td>
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<tr>
<td>November 04, 2011</td>
<td>Keystone (AP)</td>
<td>Location: Lehigh Valley Hospital, Allentown, PA</td>
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<td>Contact: Lauren Ramsey, 717-558-7850, ext. 2691, e-mail: <a href="mailto:Iramsey@pamedsoc.org">Iramsey@pamedsoc.org</a></td>
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<td>ACS Representative(s): Thomas V. Whalen, MD, FACS</td>
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<tr>
<td>November 04, 2011 - November 05, 2011</td>
<td>Wisconsin Surgical Society - A Chapter of the ACS</td>
<td>Location: American Club, Kohler, WI</td>
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<td>Contact: Terry Estness, 414-453-9957, e-mail: <a href="mailto:wisurgical@att.net">wisurgical@att.net</a></td>
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<td>ACS Representative(s): David B. Hoyt, MD, FACS</td>
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<td>November 18, 2011</td>
<td>Japan</td>
<td>Location: Tokyo, Japan</td>
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<td>Contact: Kyoichi Takaori, MD, FACS, 81-75-751-4323, e-mail: <a href="mailto:takaori@live.jp">takaori@live.jp</a></td>
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Ms. Peebles is in the Division of Member Services, Chicago, IL.

Medical Group Management Association (see photo, page 78). In New York, on May 10, ACS members joined with members from various state specialty societies, and the Medical Society of the State of New York, to meet with legislators (see photo, page 78).

Both the Connecticut Chapter and the New York Chapter received ACS advocacy grants to plan and conduct their state capitol visits. For information on or assistance with state capitol hill visits, contact the College's Division of Advocacy and Health Policy at 312-202-5358. For more information, see the Advocacy advisor article on page 57 of this issue.

Tennessee Chapter supporting tort reform
Along with the Tennessee Medical Association and other state specialty societies, the Tennessee Chapter has been a visible and involved supporter of this year’s state Civil Justice Act of 2011 (H.B. 2008/SB 1522). The significant features of this legislation include caps on noneconomic damages up to $750,000 for pain and suffering, and loss of consortium (future earnings and medical bills are excluded); and punitive damages are capped at twice the compensatory damages or $500,000, whichever is greater.

The chapter utilized the College’s State Legislative Action Center (http://capwiz.com/sslac/home/), and as a result, more than 80 chapter members responded to the requests to contact their legislators. At press time, this legislation was awaiting the Governor’s signature. For more information about the state Civil Justice Act of 2011, contact Wanda Johnson, Executive Director, at 931-967-4700, or via e-mail at wanda@tnacs.org.

Argentina Chapter conducts annual education program
In late May, the Argentina Chapter hosted the 20th annual education program, which was attended by more than 300 surgeons. Carlos A. Pellegrini, MD, FACS, Chair, ACS Board of Regents, represented the College, and he presented several clinical sessions, as well as an update on College activities and programs (see photo, this page).

Chapter anniversaries

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<th>Month</th>
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<tbody>
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<td>New Jersey</td>
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<td>Keystone (PA)</td>
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<td>West Virginia</td>
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<td>August</td>
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<tr>
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<td>Brooklyn-Long Island, NY</td>
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<tr>
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<td>Northwest Pennsylvania</td>
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<td></td>
<td>Rhode Island</td>
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</table>

Argentina Chapter, left to right: Alberto R. Ferreres, MD, PhD, MPH, FACS, Program Chair; Dr. Pellegrini; Eduardo N. Saad, MD, FACS, Governor; and Alfredo P. Fernandez Marty, MD, FACS, President.