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Have we entered uncharted waters?
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Looking forward

The demands on surgeons in practice and in training to demonstrate competence continue to grow. To appropriately respond to these evolving expectations, professional organizations must now offer an expanded array of educational programs for learners at each stage in their professional development.

The American College of Surgeons (ACS) is deeply committed to improving educational opportunities for all surgeons, particularly those in training, and the College has developed a strategic plan to ensure that we can better fulfill this mission. Under the leadership of Ajit K. Sachdeva, MD, FACS, FRCSC, the College’s Division of Education has made major strides in recent months toward advancing our portfolio of proficiency-based curricula for residents and medical students. This growth has occurred in collaboration with the Association of Program Directors in Surgery (APDS) and the Association for Surgical Education (ASE). Importantly, all three parties have agreed that the ACS should take the lead in making these programs available.

Support for the development, launch, and implementation of these curricula, along with the associated assessment tools, will be provided through the Division of Education. All of these courses incorporate leading-edge education and training methods, including the use of simulators and simulation to provide safe hands-on learning experiences.

Surgical skills curriculum

The ACS has been working with the APDS to create a three-phase surgical skills curriculum for surgical residents. The 20 modules in Phase I of this program address procedures and tasks. New videos produced this past spring increase the educational impact of this component of the curriculum. In addition, robust assessment tools based on the established Objective Structured Assessment of Technical Skills model have been added to each module in Phase I. These instruments will permit program directors to reliably and accurately assess their residents’ surgical skills.

Development of the modules in Phase III is under way. A small group of surgeons and academics was recently charged with reviewing all 10 modules in this part of the curriculum, which focuses specifically on interdisciplinary and inter-professional teamwork. The modules will be revised and updated as needed and rigorous assessment tools will be added to ensure appropriate resident assessment.

After the revisions to Phase I and Phase III are completed, we will begin work on the 15 modules in Phase II, which centers on the development and improvement of hands-on operating skills and techniques. Additional modules will be developed to address the broad range of complex surgical procedures that residents will need to perform in practice. These modules will encompass use of sophisticated simulation technology, and we are in negotiation with several companies that have the technology to develop simulators that can meet specific curriculum objectives.

Resident preparatory curriculum

As we all know, the transition from medical student to surgical resident is a critical phase in a surgeon’s professional development. The scrutiny of this key milestone has intensified in recent years.
with members of the academic community raising significant concerns regarding whether medical students are adequately prepared to start residency training and provide safe patient care. The ACS, APDS, and ASE are combining forces to develop a surgery resident prep curriculum, a multidimensional and modular program, which will help fourth-year medical students to better prepare for the next stage of surgical training.

During the 2012 Surgical Education Week, March 19–24 in San Diego, CA, the ACS, APDS, and ASE made great progress toward defining specific modules and the associated assessment tools. Several modules in this curriculum will be released this year with the goal of launching the entire program in spring 2013. We anticipate the quick and successful promulgation of this program in light of the fact that the leadership of the Association of American Medical Colleges has offered their support in introducing it in medical schools throughout the nation.

**Focus on medical students**

The ACS and ASE have produced a Medical Student Simulation-based Surgical Skills Curriculum to assist students in the first through third years of medical school to develop basic surgical skills. A number of modules in this curriculum were highlighted during a workshop at Surgical Education Week this year, and several will be launched this year with the goal of implementing the entire program in late-spring 2013.

In addition, the ACS and ASE recently signed a formal agreement to create a Core Surgery Curriculum for all students in the first three years of medical school. This comprehensive curriculum will center on both surgical knowledge and patient care skills. A steering committee for this program has been appointed and has begun planning the curriculum.

Moreover, we are proceeding with the development of a Special Verification and Validation Examination that program directors would be able to offer to all of their incoming residents to assess their knowledge and skills in various domains. The ACS Division of Education will offer this online exam, which will enable program directors to determine the content areas they need to address to move each resident from direct to indirect supervision in accordance with the new requirements of the Residency Review Committee and the Accreditation Council for Graduate Medical Education. We anticipate that this examination will be a major advance in the early education and training of residents.

**Producing better surgeons**

Through the strategic plan outlined here, the ACS will be able to provide program directors, clerkship directors, and other surgical educators with objective information on the longitudinal progression of residents and medical students. This set of educational programs will be an invaluable resource to the individuals who have assumed the critical responsibility of educating the next generation of surgical professionals.

David B. Hoyt, MD, FACS

If you have comments or suggestions about this or other issues, please send them to Dr. Hoyt at lookingforward@facs.org.
Twenty-first century surgery:

Have we entered uncharted waters?

by

Lawrence Rosenberg, MD, PhD, FACS, FRCSC,

and

Thomas Schlich, MD, Dr. habil.
Surgery is at an historic convergence of developments. As a result, the discipline as we have known it over the last 150 years may be in the earliest stages of dissolution—a victim of technological progress. Although this concept may seem somewhat paradoxical, given that surgery has always benefited from technologic advances, we may have reached the tipping point at which further innovation will jeopardize the surgeon’s traditional role.

Whereas in the past, technological breakthroughs often led to an increase in the number, scope, and complexity of surgical procedures, emerging technologies allow for smaller and fewer operations—a trend that will undoubtedly continue as devices become more sophisticated and miniaturized. Moreover, breakthroughs in our understanding of the molecular basis of disease, in imaging, and in instrumentation, along with the advent of energy-directed devices, will result in dramatic therapeutic advances, some of which are already making certain surgical treatments obsolete.1 The best example of this trend is the use of endoscopic retrograde cholangiopancreatography for common bile duct stones, but the advent of radiosurgery for early stage lung cancer and focal therapy for prostate cancer are on the immediate horizon.

Rise and fall of modern surgery

The rise of modern surgery was identified with the introduction of new operative procedures for treating diseases that had previously been treated medically or not at all.2 Classic examples include appendectomy and tonsillectomy, which marked the beginning of routine elective surgery on a mass scale; transplantation, which opened totally new prospects for the surgical cure of end-stage disease; radical mastectomy, which epitomized the notion that cancer could be cured surgically; and treatment of peptic ulcer disease through a potpourri of gastric procedures.3-6 These approaches have all changed significantly, with respect to their perceived necessity or due to the fact that the procedures have been downsized in scope, indication, or invasiveness.

In some fields, it was not only the introduction of new technology, but also the changing of criteria for effectiveness that has made surgery less attractive. Thus, the analysis of long-term outcomes has played to the disadvantage of some commonly performed procedures, as highlighted by the recent history of coronary bypass surgery.7 In a rather prominent Business Week article, a number of leading American cardiologists voiced the opinion that, except in a minority of patients with severe disease, coronary artery bypass surgery operations do not prolong life or prevent future heart attacks. These physicians went on to state that consideration should be given to retiring the procedure in light of equally efficacious pharmacological alternatives with or without stenting procedures performed by nonsurgeons.8

As a consequence of these technological changes, by the 1970s the steady increase of surgical operation rates leveled off.9 In the early 1980s, the number of operations performed per surgeon actually decreased by 25 percent.9 This drop occurred with a change in the spectrum of surgical interventions. Originally, in the 1970s, most general surgeons’ operating room time was spent performing intra-abdominal procedures. About one-quarter was expended on the three bread-and-butter operations—cholecystectomy and other biliary procedures, hernia repairs, and appendectomies. Many of these procedures were challenged and sometimes replaced over the past 20 years by radiologic and endoscopic treatments or by watchful waiting with or without antibiotics. These strategies either replaced open surgical interventions completely or significantly reduced their need. As a result, the surgeon was effectively removed, according to occupational sociologist James R. Zetka, “from the medical team that evaluated, diagnosed, and treated patients with such conditions. Holding the downstream position in health care delivery, and having much of their authority deflated during the period in question, general surgeons were powerless to reverse this course.”9

Furthermore, advanced imaging now extends beyond diagnosis into the interventional realm, too. The trend will move away from mechanical instruments of the Industrial Age to energy-directed instruments, including high-intensity focused ultrasound, thermal directed systems, microwave instruments, and femtosecond lasers.10

Disruptive innovation

The replacement of traditional surgery with new technologies is an example of “disruptive innovation,” a concept proposed by Harvard Business School professor Clayton Christensen to explain how otherwise well-managed organizations and professions fail to deal with technological change.11,12 Fundamental to this concept is the contrast between sustaining technology and disruptive technology. The former are highly developed, sophisticated, and comparatively
expensive, and tend to target an existing market. Conventional open surgery is a sustaining technology. Minimally invasive procedures, including endovascular approaches, by contrast, represent disruptive technology, which are typically cheaper, simpler, and frequently more convenient to use. They initially target fringe markets, and market leaders often fail to take them up. It is precisely those practices that have allowed them to become industry leaders in the first place and that later make it extremely difficult for these leaders to develop the new technologies that ultimately steal their markets. It is important to realize that the failure to deal with disruptive technology does not stem from a lack of access or understanding of the technology itself, but rather from the organization's structure and practices that preclude it from recognizing and investing in the disruptive technology until it is too late to compete successfully. Witness the recent decline of Research in Motion and Hewlett Packard in the face of the introduction of Apple's iPhone and iPad products.

Mr. Zetka has examined the emergence of minimally invasive technologies and surgeons' resistance to them in terms of skills disruption. He found that new technologies disrupted workplace routines and threatened surgical skills because the new skills were quite different than those surgeons had developed and used historically. The traditional surgical workplace was dominated by a strong occupational culture that embraced the principles of surgical judgment, good hands, and large incisions. The new technologies, by contrast, moved the site of the surgical act from a direct, tactile environment to an abstract video screen environment. This environment requires different interpretive and hand-eye coordination skills than traditional surgery. The experiential knowledge and the open surgery skills that surgeons had spent many years acquiring could not readily be applied to the new modality.

Surgeons often remained focused on their performance in open surgery and chose not to play a role in these new developments, leaving the development of new technology to their nonsurgical colleagues. This was, after all, how things had worked for a long time. Even distinguished academic surgeons thought “laparoscopic surgery was a fad, would never catch on, and had no place in modern surgical practice.”

In cardiac surgery, technologies that were viewed as “too medical” were rejected in favor of more traditional surgical approaches that involved cutting and sewing. Cardiac surgeons had good reasons to resist change. In the early 1960s, the technological innovations of cardiopulmonary bypass and heart valve prostheses had led to the entrenchment of the specialty. The subsequent development of coronary bypass surgery as an effective anatomic treatment for the most common life-threatening disease in Western society resulted in an explosion in the number of cardiac operations performed.

“Cardiothoracic surgeons increasingly concentrated on a few, high volume, high intensity, high cost procedures with excellent financial return.” Moreover, the income that these standard cardiac procedures generated fueled a dramatic expansion of the medical infrastructure in centers large and small throughout the United States. Understandably, cardiac surgeons were reluctant to tamper with success. They hesitated to “devote time, training, and research resources to such non-traditional and disruptive technologies as angioplasty, percutaneous vascular grafts, and radiofrequency arrhythmia ablation.” In the meantime, angioplasty advanced steadily and transformed the interventional care of coronary artery disease to a point where fewer and fewer people require bypass surgery.

The development of surgical techniques thus followed a typical sustaining technology path. Even though surgery had a history of constant innovation, the normal pattern had, in fact, been “more of the same.” Surgeons who developed new instruments, new techniques, and new procedures built on what they had learned previously. The new disruptive technologies in the late twentieth century were different. Often originating outside surgery, they required surgeons to abandon their old treatment paradigms. They also required new group-coordination strategies, which were “alien to surgeons’ ethos of individual responsibility and control.”

Adjustment and competition

Eventually, surgeons in some fields felt compelled to change their orientation to include endoscopic technology because they were losing territory to the new competitors. Thus, during the 1980s, surgeons started embracing the gastrointestinal endoscope and staked claims over its operative applications. At that time, individual surgeons, often in community practice, made the first attempts at laparoscopic gallbladder removal. More and more U.S. general surgeons became interested and flocked to short courses to learn the procedure. This time, general surgeons countered the technological threat with a bold technological in-
novation of their own in the form of laparoscopic gallbladder removal. After considerable turf losses over two decades, and in the face of challenges to one of their bread-and-butter procedures, general surgeons could, for the first time, offer a ‘minimally invasive’ procedure of their own to patients.9 AS Mr. Zetka notes, “Laparoscopic gallbladder surgery, more than any other development in the 1990s, helped to salvage general surgery’s market position and reputation.”9 It would take another 15 years for the laparoscopic tide to wash over most of the rest of conventional general surgery, disrupting surgical markets by shifting patient demand away from the established procedures. Many surgeons responded critically to these events and sought to restrict this technology to academic institutions and to controlled clinical trials.9 Laparoscopic techniques, however, do not belong to surgeons alone. Gastroenterologists (GIs) had established de facto control over the development of endoscopy long before the general surgeons became interested. Thus, surgeons were unable to dissuade primary care physicians from referring patients to GIs for endoscopic procedures. This reflected surgery’s structural weakness stemming from a downstream, referral-dependent position in health care delivery.9 In the end, surgery’s “belated attempt to incorporate endoscopy into the surgical armamentarium” had a modest effect at best. GIs remain potential competitors for control over the laparoscope. And the endoscopic approach to intra-abdominal surgery is likely to become the next battleground for surgeons and their nonsurgeon GI colleagues, should ongoing clinical trials demonstrate the technology to be safe and efficacious.14 Similarly, vascular surgeons, interventional cardiologists, and interventional radiologists can all claim expertise in managing thoracic aneurysms through endovascular technologies.15 Needless to say, these developments have resulted in increasingly vocal turf battles.16 Eventually, the vascular interventionalist may not even be a physician. A skilled interventionalist primarily requires video gaming skills that other health care professional could acquire with practice. Over the last 20 years, “surgeons have found that they either must become competent providers of less invasive care or lose a significant portion of their patient base.”17 In light of all of these developments, surgical leaders have called for surgeons to adjust to “a future that involves the use of multiple technologies and in which rapid technological change is the norm.”11 “It was possible for a surgeon who finished training in the late 1970s to have a 20-year or 25-year career with very little alteration of their technical armamentarium, but that will never happen again.”13 Therefore, surgeons must become actively involved in new technology early on in the development and adoption lifecycle.18

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Already specialization has greatly decreased the number of surgeons who can respond to trauma and surgical emergencies. This consequence is not because specialty surgeons are unwilling to treat such patients, but because they no longer feel competent in these areas.19

Surgical training must be long enough and rigorous enough for the trainee to acquire not only technical skills, but also certain intangibles. In his 2008 presidential address to the Society for Surgery of the Alimentary Tract, John Bowen, MD, FACS, warned that early specialization after only two or three years of general surgery “will produce a surgical workforce of narrowly trained specialists who lack the foundation, maturity, and breadth of experience to meet the challenges they will surely confront in their careers.”20,21

Super-specialization also carries the risk that surgeons will become mere technicians, something that has traditionally been anathema to the profession. It conjures up memories of the old subordinate role that the surgeon had in traditional Western medicine. The nineteenth century rise of surgery was based on the rejection of that role and the adoption of a new status as scientifically trained physicians who participate actively in the healing plan.2 By abandoning this successful strategy, surgeons could be downgraded to mere proceduralists.15

Another option would be to go back to the original values of a broader concept of general surgery, which gives surgeons an important role in disease management. For cardiac surgery, as an example, it has been suggested that practitioners should take on the role of the generalists because they are uniquely qualified to use multiple technologies to solve complex cardiac problems, including percutaneous technologies, whereas cardiologists are limited to that one technology.11 Furthermore, cardiovascular surgeons bring specialized expertise in managing the complications associated with new technology. They also have the judgment that comes with decades of experience and collective wisdom in operating in that area. “Most important, the cardiothoracic surgeon has the skills to differentiate which patients are most suitable for open chest procedures compared with endovascular approaches and understands that by possessing a hammer, the entire world is not a nail.”16,15

A more radical suggestion is Michael Porter’s notion of reorganizing medical practice around a model of “value-based health care delivery.”22 He argues that care should be organized around the way value is actually created. Today the health care system is organized around specialties, departments, interventions, and individual facilities, but value is actually created in the total care of a patient’s medical condition over the full cycle of treatment. Accordingly, Mr. Porter posits that care should be organized into integrated practice units (IPUs), encompassing all appropriate skills and specialties. Surgeons may be part of an IPU, but do not alone determine value because they depend on others before and after a surgical intervention for the ultimate success of the care provided. In other words, high-value care is organized not by intervention and specialty, but around each medical condition. This means that the new division of labor would be based on problems and organ systems, and not on whether procedures involve cutting. Considering that “the distinction between cardiologist and cardiac surgeon based on the historical difference between internal medicine and surgery is increasingly obsolete,”12 the care of patients with cardiac disease and pulmonary disease could be completely reorganized. Instead of starting as surgical or medical residents, practitioners could start as cardiac practitioners to be trained “in a broad based environment which incorporates all aspects of cardiac disease including diagnosis, interventional radiology, interventional cardiology, electrophysiology, and cardiac surgery.”12 Members of this new specialty need not fear change in their field; they would be organized in a way that allowed adaptation to any technological change.12

The surgeon of the future

The impact of technological advances on the surgical profession during the waning years of the twentieth century and the early years of the twenty-first century is fundamentally different from earlier periods. Thomas R. Russell, MD, FACS, former Executive Director of the ACS, is right in saying that “the practice of surgery just isn’t what it used to be. [The] meaning of surgery has changed, driven by advances in technology.”17 However, it is the way technology transforms the field that is new.10 In fact, various disruptive technologies have been converging to fundamentally and irrevocably change surgery.28 Consequently, the character of surgery is changing in a way that will make it difficult to maintain the traditional boundaries between surgical and nonsurgical treatment.17

If these developments continue, surgery as we know it could well disintegrate. Surgeons will have to reinvent themselves.18 The professional strategy of investing in bigger and more sophisticated operative
procedures that heralded the successful rise of surgery in the nineteenth and twentieth centuries is no longer applicable in the twenty-first century. The surgeon of the future will need to adapt and be able to learn a wider range of technologies quicker than ever before, a strategy that will profoundly influence the meaning of surgery as well as the professional identity of its practitioners.1,2 This approach may be seen as a chance for necessary adjustments, but it also entails risks, such as the widespread loss of general surgical skill, to the disadvantage of patients in need of such surgical competency. Therefore, today's surgeons need to participate actively in shaping a health care delivery frontier in which they will still have a stake.

References


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Health information technology, meaningful use criteria, and their effects on surgeons

by James Friedman;
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Don Selzer, MD, FACS;
and John G. Meara, MD, DMD, FACS
In the face of rising costs, inconsistent quality, and the recent economic decline, strategies aimed at creating a more efficient health care system now rank among the most contested political issues in the U.S. As evidenced by the attention given to health information technology (HIT) in the Health Information Technology for Economic and Clinical Health (HITECH) Act, which was incorporated into the American Recovery and Reinvestment Act of 2009 and the Affordable Care Act of 2010, HIT has become an important component of the federal government’s attempts to reduce health care costs while increasing quality of care.

Creation of an oversight committee, the release of stimulus funding, and the offer of financial inducements to move to computer-based reporting (with financial penalties for noncompliance to follow) have provided an incentive for more physicians to adopt and use HIT. The government has set a goal of universal electronic health record (EHR) adoption before 2015. These incentive programs, which will affect all U.S. physicians, have raised great concern among surgeons due to their complexity and perceived preferential treatment of primary care physicians. Government recognition of these issues has allowed specialty groups to voice their concerns with the goal of ultimately editing incentive program criteria to be more inclusive of other specialties.

The Stage 1 final rule was implemented in 2011 and calls for adherence to 15 core set objectives, five out of 10 menu set objectives, and six clinical quality measures. The proposed Stage 2 rule was released for comment in February 2012 with the intent of increasing the core objectives to 17, three out of five menu set objectives, and 12 clinical quality measures. Numerous organizations representing the entire spectrum of health care responded with comments for the May 7 deadline.

Stage 3, the final stage, will clearly be the first major opportunity for surgeons to see how HIT can be applied to surgical care, given that Stages 1 and 2 have largely focused on getting the infrastructure in place. Because the criteria are still evolving based on physician feedback, it is important at this time for surgeons to learn how HIT and HIT-related legislation affects surgical practice and the current issues that need be addressed in the most recent round of proposed regulations. Furthermore, with the American Board of Medical Specialties adopting a new sub-certificate in clinical informatics, the surgical profession will need to develop a cadre of well-trained surgical “informaticians” to help ensure that the continued development of HIT meets the unique needs of surgical practice.

Defining HIT

HIT is a broad term encompassing any fusion of electronic information processing with medicine. In the U.S., communication technology is subsumed within HIT, whereas internationally the acronym HICT is used to signify the importance of communication as well as information. Another key term is “biomedical and health informatics,” which is used to describe the science of information use in health care delivery, research, and public health. Some consider HIT to be focused on the technology whereas informatics is focused on technology’s proper use in order to achieve desired goals. Both are essential concepts.

Additional features of HIT and robust EHRs include decision support for clinicians and patients, electronic reminders, telemedicine, secure electronic health communication, knowledge retrieval systems, and data exchange networks. (See Table 1 on page 14.)

Data exchange networks are secure data warehouses of predetermined clinical information from numerous hospitals and clinical settings. These systems allow clinicians to retrieve patient data across the continuum of care, even when it is from outside of the clinician’s hospital network.

The Indiana Network for Patient Care (INPC) is one such data exchange. Created in 1994 with funding from the National Institutes of Health and the National Library of Medicine, it merges data from five major Indianapolis, IN, hospital systems, including 11 hospitals and 100 geographically distinct clinics and ambulatory surgery centers. All INPC participants submit a range of medical information to a separate EHR vault in a central INPC server. Now, for example, when a patient is seen in any of the INPC emergency departments, information from all five networks may be viewed in one consolidated virtual medical record.

HIT’s effect on surgical practice

In 2011, the U.S. Centers for Disease Control and Prevention (CDC) reported that only 57 percent of physicians were using an EHR, with physicians at small and rural hospitals less likely to use any type of HIT. In the face of the slow rate of adoption, it
is important that physicians understand how their practice may benefit from HIT implementation (see Table 2, this page). Although most evidence concerning HIT has focused on large hospitals or primary care groups, the same benefits likely apply to surgical practice as well.

Nonetheless, implementation may be a stressful process initially, depending on the product implemented as well as how much training is provided beforehand. Evaluation data from AmericanEHR Partners show that if fewer than three days are spent in training before EHR implementation, successful use and/or subsequent satisfaction is negatively affected. It is safe to say that EHRs and their use are not fixed but dynamic, and improvements in both safety and functionality can be expected. Challenges

Table 1. Common examples of HIT

<table>
<thead>
<tr>
<th>Type</th>
<th>Abbreviation</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Electronic health records/electronic medical records</td>
<td>EHR/EMR</td>
<td>In its most basic form, a computer-based medical record allows storage, organization, and retrieval of patient medical data; other possible functions include decision-support and quality/safety and patient interaction</td>
</tr>
<tr>
<td>Clinical decision support</td>
<td>CDS</td>
<td>Software that uses patient health information to recommend treatment options to the physician</td>
</tr>
<tr>
<td>Computerized physician order entry</td>
<td>CPOE</td>
<td>Software that allows clinicians to enter patient orders electronically</td>
</tr>
<tr>
<td>Picture archiving and communications system</td>
<td>PACS</td>
<td>Stores and integrates multiple types of radiological images</td>
</tr>
<tr>
<td>Medication dispensing robot</td>
<td>ROBOT</td>
<td>Robots that deliver and dispense physician-ordered medications to correct patient areas</td>
</tr>
<tr>
<td>Automated dispensing machines</td>
<td>ADM</td>
<td>A computerized drug storage device that allows medication tracking and dispersal near the point of care</td>
</tr>
<tr>
<td>Electronic medication administration records</td>
<td>EMAR</td>
<td>Electronic legal record of all medications dispensed to a patient</td>
</tr>
<tr>
<td>Bar coding at medication administration</td>
<td>BARA</td>
<td>Medications are assigned bar codes for checking and tracking purposes</td>
</tr>
<tr>
<td>Bar coding at medical dispensing</td>
<td>BARD</td>
<td>Medications are confirmed by bar code before dispensing</td>
</tr>
<tr>
<td>Personal health record</td>
<td>PHR</td>
<td>Most commonly today, patient access to their EHR or portions of it occur through a secure patient portal</td>
</tr>
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Table 2. Benefits of HIT implementation

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Evidence</th>
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<tbody>
<tr>
<td>Higher practice efficiency</td>
<td>• Reduces employee workload in the VA\textsuperscript{13}</td>
</tr>
<tr>
<td></td>
<td>• Saves time with pre-stored patient demographic information and history\textsuperscript{7}</td>
</tr>
<tr>
<td>Better patient outcomes</td>
<td>• Increases medical guideline and protocol adherence\textsuperscript{14,15}</td>
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<tr>
<td></td>
<td>• Can help identify occurrence patterns such as adverse drug event frequency\textsuperscript{14}</td>
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<tr>
<td></td>
<td>• Reduces average inpatient stay\textsuperscript{16}</td>
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<tr>
<td></td>
<td>• CPOE reduced medication dosing errors by 12-55%\textsuperscript{14,15,17}</td>
</tr>
<tr>
<td></td>
<td>• CDS use reduced unnecessary admissions, increased mood disorder screening, and decreased time to diagnosis\textsuperscript{18}</td>
</tr>
<tr>
<td>Reduced overhead costs</td>
<td>• Saved more than $3 billion in the VA system between 1997 and 2007, including costs of installation and training\textsuperscript{13}</td>
</tr>
</tbody>
</table>
remain; in particular, insufficient interoperability between systems remains a persistent problem, among others.

**HIT legislation**

The evidence shows that proper HIT use may increase consistency and quality of care, while reducing health care costs and medical staff workload. As a result, Congress has passed multiple bills to incentivize physicians to adopt HIT, including the following:

**Table 3. Federal HIT implementation incentive programs**

<table>
<thead>
<tr>
<th>Rewards</th>
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<tbody>
<tr>
<td>eRx Incentive Program</td>
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<tr>
<td>Medicare* EHR Incentive Program</td>
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<tr>
<td>Medicaid* EHR Incentive Program</td>
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<table>
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<tr>
<th>Penalties</th>
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<tbody>
<tr>
<td>eRx Incentive Program</td>
</tr>
<tr>
<td>Medicare EHR Incentive Program</td>
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<tr>
<td>Medicaid EHR Incentive Program</td>
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</table>

*Physicians and hospital systems may receive benefits and penalties from either Medicare or Medicaid, but not both.

†Physicians and hospital systems enrolled in Medicare that elect to participate in the Medicaid EHR Incentive Program yet fail to meet the Medicaid EHR program requirements will still be subject to the Medicare EHR Incentive Program penalty; likewise, the Medicaid EHR Incentive Program does not require participants to meet the meaningful use requirements in their first year of participation. Rather, participants must only demonstrate that they have “adopted, implemented, or upgraded a certified EHR.” However, because the law pertaining to the Medicare program requires participants to achieve meaningful use to avoid the Medicare penalty, the College has proposed to apply the penalty even to those participants who meet the year-one criteria for the Medicaid program. The College vigorously opposes this proposal.

**Medicare Improvements for Patients and Providers Act of 2008.** This act included the Electronic Prescribing (eRx) Incentive Program that created an annual financial incentive to encourage physicians to e-prescribe with any system that allowed the generation of a medicine list, the provision of alternative medications, authorization requirements, and a printed or electronic submission of each prescription.

**American Recovery and Reinvestment Act (ARRA) of 2009.** This act included the HITECH Act, establishing a $19.2 billion program to meet goals of increased EHR use by 2014 through the reduction of barriers to EHR installation and implementation. The legislation also established Medicare and Medicaid EHR Incentive Programs to aid and financially incentivize physicians to incorporate HIT services before 2015 (see Table 3, this page). These programs focus primarily on increasing use of EHRs, CPOE, and CDS. Penalties begin to kick in if approved EHRs are not implemented within the program’s prescribed timeline.

**The Affordable Care Act (ACA) of 2010.** This law requires the development of standards and protocols intended to make data protection and patient education about health care options easier. Important examples include setting quality reporting requirements, grants for community-based collaborative care networks, grants for technical assistance, grants for EHR purchase, and bonus payments for physicians meeting Medicare HIT guidelines. The law also requires the Agency for Healthcare Research and Quality to expand HIT adoption and use. The rewards and penalties associated with each program are listed in Table 3.
Eligibility requirements

To qualify for the eRx incentive payment, physicians must be able to electronically prescribe. Information regarding incentives can be found at http://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/ERxIncentive/index.html?redirect=/ERXIncentive.

All physicians and hospitals are eligible to register for HIT implementation benefits with Medicare. Physicians only can register with Medicaid if more than 30 percent of their patients are Medicaid enrollees and the program is offered in their state. To qualify for financial incentives under either program, physicians and hospitals must demonstrate meaningful use (MU) of a certified EHR platform. In the first year of participation in the Medicaid version of the program, physicians and hospitals must only demonstrate that they have “adopted, implemented, or upgraded a certified EHR.” Further instructions and details for the Medicaid plan can be found at the CMS website: www.cms.gov/EHRIncentivePrograms.

Certified EHR and MU are defined as follows:

Certified EHR: EHR technology that has been tested and certified by Office of the National Coordinator. A list of certified EHR platforms is available at http://onc-chpl.force.com/ehrcert. EHR systems, in combination with other HIT platforms, may be purchased separately or integrated with a choice of local or Web-based data storage. There is no evidence of a cost benefit when adopting a single integrated platform or multiple stand-alone platforms.

MU: Physicians must report annually that they are successfully using EHR to qualify for financial incentives. MU criteria define what needs be reported to prove successful application of HIT. The current MU criteria, known as Stage 1, focus on basic HIT implementation including data capture, available at http://onc-chpl.force.com/ehrcert. In addition to basic MU implementation, physicians will have the ability to choose one clinical decision support rule other than self-management tools, and will add focus to overall self-management tools, and will add focus to overall

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Table 4. Stage 1 Core set objectives (all 15 are required)

1. Use CPOE to enter medication orders for >30% of patients followed with EHR. Any physician who writes <100 prescriptions a year is excluded.

2. Use drug-drug and drug-allergy interaction checklists.

3. Maintain up-to-date problem list of current and active diagnoses for >80% of patients.

4. Prescribe permissible medications electronically for >40% of prescriptions. Any physician who writes <100 prescriptions a year is excluded. Non-permissible medications are listed here: http://www.deadiversion.usdoj.gov/schedules/orangebook/e_cs_sched.pdf.

5. Maintain active medication list for >80% of patients, including patients with no medication.

6. Maintain medication allergy list for >80% of patients, including patients with no known allergies.

7. Record preferred language, gender, race, ethnicity, date of birth for >50% of patients.

8. Record height, weight, blood pressure, body mass index (BMI), and record and chart growth, BMI for children 2–20 years old for >50% of patients >2 years old. Physicians who do not treat patients >2 years, and physicians who believe height, weight, and blood pressure have no relevance to their practice are exempt.

9. Record smoking status for patients >13 years old for >50% of patients.


11. Implement one clinical decision support rule other than drug-drug and drug-allergy interaction checklists relevant to specialty along with ability to track compliance. Clinical decision support is any addition to EHR that provides physician with case or person-specific information.

12. Provide >50% of patients who request it, an electronic copy of their health information (diagnostic test results, problem list, medication list, medication allergies) within three business days.

13. Provide clinical summaries to >50% of patients within three business days of each office visit.

14. Capabilities to electronically exchange clinical data (for example, problem list, medication list, allergies, test results) with other providers or entities. An unsuccessful test of electronic exchange is considered valid for this objective.

15. Protect electronic health information. EHR must have certified data protection, and the system must be updated as needed.

Obstacles and concerns

Since the release of the Stage 1 MU criteria, surgeons have raised several concerns. One issue centers on the fact that MU criteria related to patient information collection are too specific to primary care, making them difficult for surgeons to meet. The American College of Surgeons (ACS) is currently pushing to make criterion exceptions for specialists to prevent surgeons from being forced to track patient data that are irrelevant to their practice. The ACS also is advocating surgical registry participation through HIT as an optional criterion. This change would effectively provide another non-required, surgeon-friendly option that could replace any other requirement.

Another concern is that required participation in quality improvement programs may slow HIT adoption, as practices may need to make major changes in management techniques. The ACS advocates that involvement in quality improvement programs, although important, should be optional so as to increase rate of HIT implementation.

The proposed expansion of MU criteria in Stage 2 requirements has also sparked concern. The ACS maintains that the new requirements are too aggressive and may be too difficult for many surgeons to meet. The proposal also includes troubling provisions, such as applying the Medicare penalty to the physicians and hospitals that have met the first year requirements of the Medicaid Incentive Program, and the large time gap between the year that the Medicare EHR penalty is applied and the year in which CMS assesses whether the physician has met the program requirements.

Ongoing advocacy for surgeons is especially important as the MU criteria are expected to evolve over the next few years to correct problems and inequalities. The next generation of MU criteria, known as Stage 2, is slated to take effect in 2013 and will become mandatory in 2014 for physicians and hospitals that have already completed at least one year of the EHR incentive program under Stage 1. These proposed changes were available for public commentary until May 7, 2012. Many of the proposed changes, if they become effective, will directly affect surgical specialties. For example: (1) lab and radiology orders will count towards CPOE use, making the core set objective 1 more applicable to surgeon practice; (2) recording more than 50 percent of advanced direc-

**Table 5.**
Menu set objectives (5 of 10 are required)

<table>
<thead>
<tr>
<th>Objective</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Implement drug formulary checks. Physician must have access to ≥1 internal or external formulary. Any physician who writes &lt;100 prescriptions a year is excluded.</td>
</tr>
<tr>
<td>2.</td>
<td>Incorporate &gt;40% clinical lab-test results into EHR. Physicians who order no lab tests or whose results are not positive/negative or numeric are exempt.</td>
</tr>
<tr>
<td>3.</td>
<td>Generate at least one list of patients maintained by EHR by specific conditions for quality improvement, disparity reduction, research, or outreach.</td>
</tr>
<tr>
<td>4.</td>
<td>Send patient reminders to &gt;20% of patients &gt;65 years old or &lt;5 years old per patient preference for preventative/follow-up care. Physicians with no EHR patients meeting the age criteria are exempt.</td>
</tr>
<tr>
<td>5.</td>
<td>Provide &gt;10% of patients electronic access to health information (lab results, problem lists, medication lists, allergies) within four business days of the information being available to the physician.</td>
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<tr>
<td>6.</td>
<td>Use EHR technology to identify and provide &gt;10% of patients patient-specific education resources.</td>
</tr>
<tr>
<td>7.</td>
<td>Perform medication reconciliation by comparing medical record to an external medical list for &gt;50% of patients transferred from another setting.</td>
</tr>
<tr>
<td>8.</td>
<td>Provide a summary care record for &gt;50% of patients transferred or referred to another setting.</td>
</tr>
<tr>
<td>9.</td>
<td>At least one test of capability to submit electronic data to immunization registries and actual submissions is required. Exempt if no immunizations given or if no immunization electronic registry exists.</td>
</tr>
<tr>
<td>10.</td>
<td>At least one test of EHR technology capacity to provide electronic syndromic surveillance data to public health agencies, and actual submissions according to law.</td>
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</table>


**Table 6.**
Clinical quality measures (required only if applicable to the practice)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Description</th>
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<tbody>
<tr>
<td>1.</td>
<td>Blood pressure level, smoking status, and adult weight screening with follow-up must be reported for each patient.</td>
</tr>
<tr>
<td>2.</td>
<td>Any clinical quality measures not applicable to the practice can be replaced with the following: influenza vaccination in patients &gt;50 years old, child weight assessment and counseling, or childhood immunizations.</td>
</tr>
<tr>
<td>3.</td>
<td>An additional three measurements must be reported from a list of 38 possible measurements listed at the CMS website.</td>
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</table>

and, if applicable, keep track of up to six clinical quality measures (see Table 6, this page).
tive discussions will be mandatory, potentially affecting how surgeons, patients, and patient primary care physicians coordinate care; (3) sending reminders to at least 10 percent of all unique patients for follow-up will become a core requirement, potentially altering how surgeons interact with patients; and (4) providing accessible lists of all members of a patient’s care team will be mandatory, which may affect surgeons working in institutions, such as academic centers, that have large, rotating teams.27

Although some of these changes do respond to the College’s concerns, they by no means cover all issues, and may in fact produce new ones. Therefore, the ACS will continue to advocate for surgeon-friendly criteria. Furthermore, as more surgeons implement HIT, it is important that they report the issues they encounter to the ACS, so that the College can identify new, pertinent issues and help shape future incentive requirements to be more relevant to surgical practice.

Conclusion

Recent federal legislative efforts are slowly bringing American medicine to levels of HIT implementation seen in other economically developed nations. It is vital that surgeons remain actively involved in reporting concerns about MU criteria. By engaging in this challenge directly, surgeons will help themselves and their patients to ensure that MU is “meaningfully useful” to surgeons and all the other key stakeholders.

References

8. Furukawa MF, Raghu TS, Spaulding TJ, Vincz A. Adoption of health information technology for medication safety in U.S.


Surgical diseases historically have received less public health attention and less global support than have the conditions other medical specialties treat. Over the past decade, however, the surgical specialties have seen exponential growth in both interest and involvement within the global health education community. Surgical societies have established international subcommittees and seminars, and currently a paradigm shift is occurring in global health education, with the acceptance of new training opportunities for medical students and residents, and even the development of fellowships in global surgery. Given the ongoing globalization of our society, providing surgical care in medically underserved areas is more important than ever. The recent American Board of Surgery (ABS) decision to allow international electives to be counted toward sitting for the general surgery boards (under certain stipulations) is a monumental step in American surgery. Program directors may now begin or, in some cases, continue to tailor surgical curricula to meet the needs of the current generation of trainees.

Above: A Malawian child. Opposite: OR team performing surgical pause prior to excision of a right gluteal mass. Dr. Sakran and clinical officer Mr. Beza are at left.
Does the need exist?
The global burden of surgical disease continues to rise, and remains one of the top killers in low- and middle-income countries (LMIC). Nonetheless, noncommunicable diseases have received relatively scant attention in comparison with communicable diseases. Paul Farmer, MD, recently referred to surgery as the “neglected stepchild of global public health.” Only 3.5 percent of 234 million major surgical procedures performed in 2004 took place in the countries representing the poorest 35 percentile of nations (those with health care expenditures <$100 per capita).

Lack of funding for global surgery is one of the main obstacles that must be overcome to address the global surgery challenge. Lack of interest among surgeons, until recently, has also been a major barrier. Recognizing the increased interest among its members, the American College of Surgeons (ACS) leadership conducted a study from 2001 to 2003 to evaluate the interest in volunteerism among the College’s membership. The study resulted in the creation of the Operation Giving Back (OGB) program. Initiatives such as OGB are allowing health care professionals to narrow the inequities of care seen between LMIC and high-income countries.

To address these disparities, the surgical community must come together and use a multi-faceted approach to provide effective surgical care. American surgical training programs can, and should, be a key component in the reduction of the global burden of surgical disease, which at the same time will enhance training and meet the needs of those entering residencies in the twenty-first century.

Global surgery meets surgical training
In the last few years, surgical trainees have shown a clear and considerable increase in interest in global surgery. In a national survey sent to all resident members of the ACS in 2008, 92 percent of respondents expressed clear interest in global surgical work or international electives (n=724). In fact, 82 percent of respondents said they would prioritize such an experience over many of their electives, and most are willing to use their own vacation time for that purpose.

Despite the overwhelming enthusiasm residents have expressed for global surgery, and the potential value of such experiences for LMIC as well as the surgical trainee, less than one-third of residency programs offer any educational experiences in global surgery. Even a smaller percentage offer international electives. According to the residency program directors who answered the survey in 2008, the main barriers were time constraints, educational constraints, lack of funding, and lack of approval by the Accreditation Council for Graduate Medical Education (ACGME) and the Residency Review Committee (RRC). Nonetheless, more than half of the institutions surveyed were interested in establishing a curriculum for global surgery education as part of their residency training.

In recognition of the growing interest by surgical programs and surgical trainees in international elec-
tives, the RRC and ACGME have recently modified their policies and now accept international rotations in surgery under specific circumstances (see table, this page). Although the specific conditions that allow residents to rotate outside U.S. borders may be somewhat challenging to meet, having a set of standard guidelines is a step in the right direction. It will allow the surgical community to provide the best possible educational experience to our trainees. These criteria will help prevent “medical tourism,” which in this context is characterized as rotations without a defined infrastructure, curriculum, and/or mentorship. Furthermore, we must ensure that the highest ethical standards are upheld in the communities we serve. Even with all these changes taking place, questions still remain regarding the scope of practice of surgical trainees in LMIC.

While American surgical residencies are some of the best and most sought-after positions throughout the world, myriad benefits can be obtained by expanding beyond our own borders. In the U.S., the quality of surgery programs is judged by success in six specific areas as defined by the ACGME. In 2006, leaders in the field eloquently described how an international elective would fulfill and potentially enhance each of those core competencies: medical knowledge, patient care, interpersonal and communication skills, practice-based learning and improvement, systems practice, and professionalism.

A classic example of how an international elective would augment the ACGME core competencies is the adept completion of the physical exam, which has been replaced to some extent by radiographic imaging. Whereas learning how to become more proficient at interpreting radiographic imaging is an important skill for trainees to master, the art of medicine rests on the basics of performing a thorough history and physical exam. International electives will also provide trainees the opportunity to ascertain how clinicians transcend cultural barriers to allow for clear provider-patient dialogue. This is a vital competency in a culturally diverse community. Managing complex diseases in advanced stages in low-resource settings would be invaluable opportunities to improve surgical training. Surgical trainees will become more well-rounded by broadening their medical knowledge of diseases that are less prevalent in the U.S. These experiences would assist with developing better communication skills and gaining the ability to collaborate with other

### ACGME requirements for an international elective in surgery

<table>
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<tr>
<th>Requirement</th>
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<tbody>
<tr>
<td>Name and location of international site</td>
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<tr>
<td>Postgraduate year of the resident for whom the rotation is requested</td>
</tr>
<tr>
<td>Dates of the rotation</td>
</tr>
<tr>
<td>Verification that the rotation is an elective</td>
</tr>
<tr>
<td>Program’s accreditation status and cycle length (must be continued accreditation with at least a four-year cycle)</td>
</tr>
<tr>
<td>A statement that American Board of Medical Specialties-certified faculty (or qualifications deemed acceptable in advance by the RRC) will supervise the resident</td>
</tr>
<tr>
<td>A statement of the competency-based goals and objectives of the assignment</td>
</tr>
<tr>
<td>Educational rationale—A statement describing what educational experience the international rotation provides for the resident that the primary institutions or affiliates do not</td>
</tr>
<tr>
<td>Verification that there will be an evaluation of the resident’s performance based on the stated goals and objectives</td>
</tr>
<tr>
<td>A description of the clinical experience:</td>
</tr>
<tr>
<td>• Type of center (governmental, nongovernmental, private)</td>
</tr>
<tr>
<td>• Scope of practice of the host center</td>
</tr>
<tr>
<td>• A statement of the center’s operative volume and type</td>
</tr>
<tr>
<td>• A statement about the adequacy of the supportive anesthetic, radiologic, laboratory, and critical care infrastructure</td>
</tr>
<tr>
<td>• Verification that the experience will include an outpatient experience</td>
</tr>
<tr>
<td>• Verification that the resident will enter operative experiences for credit</td>
</tr>
<tr>
<td>Verification that salary, travel expenses, health insurance, and evacuation insurance are covered by the sponsoring institution</td>
</tr>
<tr>
<td>A description of the educational resources including access to a library with reasonably current resources and/or reliable access to Web-based educational materials</td>
</tr>
<tr>
<td>A statement addressing physical environmental issues including housing, transportation, communication, safety, and language</td>
</tr>
<tr>
<td>A copy of the program letter of agreement</td>
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</tbody>
</table>
institutions. Considering the increased diversity of the U.S. population and the rapidly globalizing economy, an international experience will augment the experience of our surgical trainees.

Volunteering versus capacity building

The burden of surgical disease accounts for 11 percent of the total burden of disease in the world. In many LMICs, the gap in surgical care provision is even more pronounced. For example, in the Central African Republic (CAR), most health care is provided by non-governmental organizations (NGOs), mainly Médecins Sans Frontières (MSF), also known in English-speaking countries as Doctors Without Borders. In fact, the MSF budget for the CAR is nearly equal to that provided by the nation’s Ministry of Health. Undoubtedly, short-term volunteer missions by NGOs, such as MSF, are currently indispensable in these severely underserved areas; however, these missions are a temporary bandage on the problem that does not address the essence of the problem. With fewer than 100 total generalist and specialist physicians to provide care to more than 4 million citizens, the CAR urgently needs sustainable surgical capacity building and educational programs, so that its health care delivery system can eventually meet the society’s needs.

These strategies (short-term volunteering and long-term capacity building) are not mutually exclusive. In the spring of 2007, the NGO Surgeons for Global Health (SGH) mission to Embangweni, Malawi, demonstrated how to integrate education with surgical capacity building and allow for long-term, feasible interventions. Malawi is a small land-locked country in Africa that ranks among the poorest in the world. There are two physicians for every 100,000 people in Malawi. So, rather than relying on physicians for health care delivery, the backbone of the health care system is composed of clinical officers. Their training consists of a three-year course at a post-secondary school, followed by a lifetime of learning through direct patient care. While in Malawi, SGH effectively taught clinical officers how to perform basic procedures (such as split-thickness skin grafts, abdominal hernia repairs, and so on) over a two-month period. Five years later, those SGH health care workers are gone; however, the clinical officers continue to provide care for patients in their community.

Challenges to care

A number of factors in LMICs contribute to the significant morbidity and mortality associated with surgical disease and often demonstrates the hazards of limited access to care. Potential barriers to providing surgical care to the world’s poorest populations include insufficient human and consumable resources, a perception that surgical intervention is not cost-effective, and a lack of effective political advocacy.

Impediments to accessing surgical care include distance, poor roads, and lack of transportation, as well as limited resources and expertise. Other possible obstacles include the direct and indirect costs associated with provision of surgical care and the local cultures’ trepidation regarding surgery.

Financial

The financial costs of treating surgical disease also have traditionally been thought to be prohibitive. In many countries, visits to surgical care facilities are deferred until people have accumulated enough money, resulting in more expensive and delayed formal health care. However, when surgical disease was analyzed through Disability Adjusted Life Years (DALYs), treatment was clearly found to be cost-effective. The average cost of basic surgical care is
$33 to $38 for every DALY that is prevented. In comparison with other more publicized health care interventions, the cost of providing surgical care is reasonable; for example, anti-retroviral therapy for the human immunodeficiency virus costs $300 to $500 for every DALY that is prevented.

Obtaining funding for surgical diseases remains a significant challenge unless public health professionals realize that a substantial investment (as had been made for communicable diseases) is required to tackle the problem. Even when funds for surgery become available, the efficacy is always questionable, as many LMIC governments suffer from a real corruption problem. As a result, a portion of the funds never reaches the intended population. This situation has made potential donors hesitant to provide funding and drives the trend toward implementing parallel systems rather than integration into one system.

Transportation

Another challenge in providing global surgical services is improving patient access to the health care system, or bringing the clinic to the patient. Overcoming this frequent barrier often is referred to as the “problem of the last mile” and requires ingenuity on the part of health care personnel.

Although consumable resources are available in some areas, a lack of appropriate distribution strategies exists, which highlights the dearth of organized health systems in many LMICs. For example, the lack of organized emergency medical services is one of the most significant impediments to providing optimal trauma care. In a study comparing prehospital death rates, 59 percent of trauma deaths occurred in the field in high-income settings versus 72 percent in middle-income, and 81 percent in low-income environments.

Social

Transcending cultural differences plays a key role in the ability to deliver global surgical care. Patients are often apprehensive about undergoing surgical procedures, especially under anesthesia, fearing a poor outcome. This problem highlights the importance of foreign health care workers integrating themselves into the community of interest. Allowing the locals to play a direct role in the various interventions being put into practice is paramount. Implementing an educational component that illustrates an understanding of the disease process that is being targeted, raising awareness about good health practices, and providing training for community health care workers can produce far-reaching positive results.

Advocacy

Advocacy involves devising strategies, evaluating measures, and proposing solutions to influence decision making at the local, state, and national level to create positive change for people and their environment.

To address the lack of adequate surgical services in Uganda, a diverse group of local stakeholders met in Kampala in May 2008 to develop a roadmap of key policy actions that would improve surgical services at the national level. Their primary goal was to generate a list of priority areas of health policy to improve surgical services in Uganda. The priority areas of action were identified as follows:

- Human resources: Improving conditions for the surgical workforce, addressing the surgical workforce shortage temporarily through task extension, redesigning the undergraduate medical curriculum, increasing practical surgical skills of graduates, and placing the focus on surgical anesthesia and nursing
• **Health systems:** Including surgical services in established policies, ensuring infrastructure for safe surgery, and coordinating policy initiatives to develop surgical services

• **Research and advocacy:** Promoting evidence-based medicine, raising public awareness about surgical services, advocating donor support on both a national and international level for collaboration among surgical specialties, and encouraging a change in the “job description” of specialty-trained surgeons to be modified from providing surgical care to include training and supervision of community health care providers

Although general health education is readily available in affluent countries, education and advocacy regarding poverty-induced health crises throughout the world are needed to provide the continued impetus for high-income countries to play a greater role in LMICs.

Despite recent increases in global health funding, available resources are far below what is needed to meet the United Nations Millennium Development Goals. Significant challenges exist, including a lack of consensus on funding priorities and increased “competition” among advocates for specific disease treatments.14

To overcome these issues, actions need to be undertaken in both the government and private sectors. Offering incentives for the private sector to increase their involvement and help fill critical funding gaps is one possibility. In the government sector, the objective is to track the effectiveness of donor spending on health. Also, sharing the evidence of progress and successes in global health initiatives has been implemented.

Whereas evidence about the impact of health care initiatives on global health is lacking, measures to collect objective evidence should be undertaken and used to formulate effective policies and innovative solutions. The strength of such evidence is required to convince policymakers about the importance of funding surgical global health priorities. The successes of current efforts in global health will be essential to galvanize support for future investments.

**Conclusion**

The field of global health within the surgical community is rapidly changing. We live in a continuously globalizing world that is integrating across a wide range of disciplines. The international community is more interconnected than ever before; however, the fruits of this globalization have not been equally shared. Although mortality from surgical disease in high-income countries has dramatically improved...
over the past 50 years, the same cannot be said for LMICs. The disparity is tremendous.

This realization became evident to one of the authors of this article, Dr. Sakran, while he was in Embangweni, Malawi. A man named Reza was carried into a makeshift trauma bay after crashing his bicycle on one of Malawi’s typically decrepit streets. The rusty handle bar eviscerated him. There was no emergency response, and he was first taken to a clinical officer. Despite the excellent skills that these clinical officers gain over time through hands-on experience, the constant interruption of supply chains that provide medical supplies, a lack of blood products, and frequent late arrival after road traffic injuries usually result in the patient’s demise—as it did for Reza. We must find a way to reduce these inequities, and provide for more long-term feasible interventions.

Clearly, interest in global health is prominent among medical students and residents currently in training. People concerned about patient care in LMICs must advocate for and take action to promote the health rights of all human beings. It will be up to our future leaders in global health care education to carry out that vision and to help foster the necessary dialogue and collaboration among citizens, professionals, communities, and policymakers.

References


Dr. Nitzschke is a fellow, division of traumatology, surgical critical care, and emergency surgery, University of Pennsylvania, Philadelphia.

Dr. Casey is the Director of Operation Giving Back, Chicago, IL.
The Governors’ Committee on Chapter Relations (GCCR), previously the Governors’ Committee on Chapter Activities, serves as an advocate for all of the American College of Surgeons’ (ACS) chapters, and monitors and reports on chapters’ activities, resources, and issues. The GCCR reports to the Board of Governors (B/G), and to the B/G Executive Committee. The GCCR is staffed by the College’s Division of Member Services. As of January, the ACS has a total of 103 chapters: 64 in the U.S., two in Canada, and 37 throughout the rest of the world.

The GCCR has undertaken a number of activities over the last year. In a lengthy meeting of the committee during the 2011 Clinical Congress in San Francisco, CA, the members of the committee agreed to a restructuring so as to better align the GCCR with the College’s ongoing agenda, with a view toward avoiding duplication of activity. As a result, the GCCR members decided to change the committee’s name to better reflect its activities. The committee also agreed that the GCCR Vice-Chair should serve at least a one- or two-year term, before becoming Chair; this change in the GCCR guidelines will provide for successful leadership transitions in the future. The committee also created an executive committee to coordinate the activities of each of the subcommittees. All of these groups now meet via conference call on a quarterly basis.

Committee members also agreed to eliminate one of the GCCR’s four subcommittees in an effort to better focus their efforts and activities. The Subcommittee on Diversity was dissolved in light of the fact that the College has a strong interest in and is focusing on expanding opportunities and activities for a wide variety of surgeons, and is involved in a robust, ongoing effort to increase diversity. The remaining three subcommittees were realigned as follows.

**Advocacy & Coalitions (A&C)**
This subcommittee is responsible for increasing and supporting advocacy activities at the chapter level. David McAneny, MD, FACS, a general surgeon in Boston, MA, chairs this subcommittee, which is de-
In addition, the A&C Subcommittee assists the DAHP with two chapter-related activities. The first program, the ACS Chapter Advocacy Grant Program, provides grants to chapters to sponsor and/or host state lobby days. This grant program, which is managed by the DAHP State Affairs staff, provided grants to 17 chapters in 16 states for 2012 Lobby Days: Alabama, Northern California, Connecticut, Florida, Georgia, Illinois, Metropolitan Chicago, Indiana, Kansas, Maine, Massachusetts, Michigan, North Carolina, Ohio, Oregon, Tennessee, and Virginia.

For the second program, also managed by the DAHP State Affairs staff, the A&C Subcommittee assists in reviewing and selecting recipients of the Arthur Ellenberger Award for Excellence in State Advocacy. This award is named for Art Ellenberger, the long-time (now retired) Executive Director of the New Jersey Chapter and expert in grassroots advocacy. The award is presented to “recognize a career of outstanding leadership and distinguished service and commitment to protecting patients’ access to high-quality surgical care by their involvement with their state’s legislative and regulatory process.” The A&C Subcommittee reviews the nominations and provides recommendations to the final selection committee.

In 2011, James Hamilton, Jr., MD, FACS, President of the Kansas Chapter of the ACS, received the Ellenberger Award. Dr. Hamilton has been a steadfast advocate for a clean indoor air ordinance, which the Kansas legislature passed in 2010. Other recipients of the Ellenberger Award have included Peter Masiakos, MD, FACS, Massachusetts Chapter; Robert Harvey, Florida Chapter (former Executive Director); Thomas Gadacz, MD, FACS, Georgia Chapter; Andrew Warshaw, MD, FACS, Massachusetts Chapter; William Doscher, MD, FACS, New York Chapter; and, of course, Mr. Ellenberger, the inaugural recipient.

Chapter Support (CS)

This subcommittee is responsible for identifying the characteristics of successful chapter organizational structures and education programs and for communicating this information to the chapters. In addition, the CS Subcommittee provides new ideas and topics for presentation at chapters’ educational programs, which may help unify surgical specialists on topics of broad appeal or shared concerns. John Rioux, MD, FACS, a general surgeon from Port Charlotte, FL, is chairing this committee. Dr. Rioux has organized the subcommittee members by region,

### Governors’ Committee on Chapter Relations

<table>
<thead>
<tr>
<th>Member (region)</th>
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<tbody>
<tr>
<td>Kevin P. Lally, MD, FACS, Chair, South Texas Chapter (6)</td>
</tr>
<tr>
<td>George M. Fuhrman, MD, FACS, Vice-Chair, Louisiana Chapter (4)</td>
</tr>
<tr>
<td>George Alsop, MD, FACS, South Texas Chapter (6)</td>
</tr>
<tr>
<td>Gerard V. Aranha, MD, FACS, Metropolitan Chicago Chapter (5)</td>
</tr>
<tr>
<td>John Armstrong, MD, FACS, Florida Chapter (4)</td>
</tr>
<tr>
<td>Lisa Bailey, MD, FACS, Northern California Chapter (9)</td>
</tr>
<tr>
<td>Miguel Cainzos, MD, FACS, Spain Chapter (15)</td>
</tr>
<tr>
<td>Gregory Spicer Cherr, MD, FACS, Western New York Chapter (2)</td>
</tr>
<tr>
<td>David W. Dexter, MD, FACS, Northwest Pennsylvania Chapter (3)</td>
</tr>
<tr>
<td>William G. Hawkins, MD, FACS, Missouri Chapter (7)</td>
</tr>
<tr>
<td>Daniel S. Johnson, MD, FACS, Illinois Chapter (5)</td>
</tr>
<tr>
<td>Danielle A. Katz, MD, FACS, New York Chapter (2)</td>
</tr>
<tr>
<td>Joel D. Lafleur, MD, FACS, Maine Chapter (1)</td>
</tr>
<tr>
<td>Matthew B. Martin, MD, FACS, North Carolina Chapter (4)</td>
</tr>
<tr>
<td>Eric Matayoshi, MD, FACS, Hawaii Chapter (10)</td>
</tr>
<tr>
<td>David B. McAneny, MD, FACS, Massachusetts Chapter (1)</td>
</tr>
<tr>
<td>Raymond R. Price, MD, FACS, Utah Chapter (8)</td>
</tr>
<tr>
<td>John P. Rioux, MD, FACS, Florida Chapter (4)</td>
</tr>
<tr>
<td>Hilary A. Sanfey, MB, BCH, FACS, Illinois Chapter (5)</td>
</tr>
<tr>
<td>Samuel Robert Todd, MD, FACS, New York Chapter (Manhattan Council) (2)</td>
</tr>
<tr>
<td>Bruce J. Waring, MD, FACS, Colorado Chapter (8)</td>
</tr>
</tbody>
</table>

### International Relations Committee liaison members

| Quyen Chu, MD, FACS (6) |
| Jamal J. Hoballah, MD, FACS (17) |
| Fabrizio Michaelissi, MD, FACS (2) |

### B/G Executive Committee Liaison

| Gary Timmerman, MD, FACS, South Dakota Chapter (8) |
and the Governors are tasked with providing direct, personal communication with every chapter in their region (see roster, page 28). The CS Subcommittee is pursuing multiple projects, including: (1) strengthening the liaison with chapters; (2) developing checklists for chapter performance; (3) assisting chapters with educational curricula for both continuing medical education (CME) and CME with self-assessment in compliance with Part II of Maintenance of Certification; (4) developing membership strategies; and (5) planning the Best Practice session for chapter leaders for the 2012 Clinical Congress, which will take place on Tuesday, October 2, from 2:30 to 4:00 pm, at McCormick Place convention center in Chicago, IL.

**International Activities (IA)**

The IA Subcommittee is composed largely of international Governors. In addition, a coordinating committee that includes international Governors and liaisons from the B/G Executive Committee, the International Relations Committee, and the Young Fellows Association has been appointed. The IA Subcommittee serves as a forum or meeting ground for all international Governors. Ray Price, MD, FACS, a general surgeon from Murray, UT, chairs the subcommittee.

The IA Subcommittee is working with all of the international chapters to both improve and facilitate membership in the College. The subcommittee’s current focus is on developing strategies to communicate the benefits of ACS membership to the international community and to work with several specific chapters for recruitment strategies. Also, the IA Subcommittee will review and develop recommendations for the ACS website. Presenting a resource-friendly website could help international members use their ACS membership benefits more effectively.

Lastly, with regard to international advocacy efforts, the international Governors will be asked to seek their country’s support for a World Health Organization draft resolution titled “Surgical Care and Anesthesia.” This resolution addresses the belief that development of health care systems in any nation must include access to, and support for, appropriate surgical care and anesthesia in equal relationship to other critical health care components. As noted in the College’s support letter for the resolution, this recommendation underscores the ACS mission of promoting access to quality, safe, appropriate surgical care; improving the care of the surgical patient; and safeguarding standards of care in an optimal and ethical practice environment. The College’s letter of support will serve as a model for the international Governors who would like to support these advocacy efforts.

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**Governors’ Committee to Study the Fiscal Affairs of the College**

by William G. Cioffi, MD, FACS

The Board of Governors (B/G) Committee to Study the Fiscal Affairs of the College has three major responsibilities: (1) review the American College of Surgeons’ (ACS) dues structure and recommend approval of any changes to the dues structure; (2) understand and monitor the College’s financial matters in order to ensure the overall financial integrity of the College; and (3) serve as a liaison body to communicate concerns or questions regarding College programs, dues structure, allocation of resources, and other financial matters from the B/G to the Board of Regents. As
The committee has reviewed the allocation of dues income to dues-supported programs. The cost of dues-supported programs exceeds dues revenue by approximately $4 million, yielding a total program cost of approximately $579 per member versus an average of $456 dues revenue per member. These data highlight the value of College membership. The committee has also reviewed the 2012 budget projections, as well as the 2013 preliminary budgets and the College’s financial forecast. Review of these data indicates that the College’s management is adhering to strong budgeting practices and that the College can look forward to continued fiscal stability.

**Investments**

The Investment Subcommittee of the Finance Committee of the Board of Regents met on February 9 and reviewed the investment performance report provided by Cambridge Associates. Despite particular volatility within the markets, the investment strategy that the College used outperformed most comparative indexes.

In conclusion, the Board of Governors Committee to Study the Fiscal Affairs of the College has exercised its responsibility to review the financial status of the ACS. The ACS is in sound fiscal condition and has the appropriate resources to continue to enact the strategic goals of our organization.

**Governors’ Committee to Study the Fiscal Affairs of the College**

William G. Cioffi, Jr., MD, FACS, Chair  
J. Craig Collins, MD, FACS, Vice-Chair  
Adam J. Cohen, MD, FACS,  
Young Fellows Association Liaison  
Mathew Thomas, MB, BS,  
Resident and Associate Society Liaison  
Anthony Atala, MD, FACS, Member  
Jon M. Greif, DO, FACS, Member  
James C. Hebert, MD, FACS, Member  
Timothy D. Sielaff, MD, FACS, Member  
Robert Peter Sticca, MD, FACS, Member  
Andrew L. Warshaw, MD, FACS, Ex-Officio

Secretary of the B/G, I serve as Chair of this committee, and I am also a member of the Finance Committee and the Compensation Committee of the Board of Regents. Over the past year, the Committee to Study the Fiscal Affairs has met by conference call and in person to fulfill our responsibilities. The committee has reviewed the consolidated financial statements of the College for fiscal year 2011. Despite the economic recession, the College remains fiscally sound. The committee has reviewed the 2011 resource allocation data, as well as the discrete cost-finding methodology adopted by the ACS. Review of these data indicates that resource allocation is consistent with the strategic goals and objectives of the College and is well-aligned with the organization’s major missions.

**Dues structure**

The committee was tasked two years ago with reviewing the dues structure of the College and with formulating a long-term dues policy to be presented to the Board of Regents. After multiple meetings, which included an open discussion at the annual meeting of the B/G, the Fiscal Affairs Committee recommended an annual dues increase of up to 3 percent annually. The Board of Regents may suspend this dues increase in any given year. The Regents approved this policy.

**Dr. Cioffi is Chair of the Governors’ Committee to Study the Fiscal Affairs of The College.**
Numerous advances have occurred in trauma care in the past three decades, resulting in reduced rates of patient morbidity and mortality. One such advance—the evolution of radiologic imaging and computed tomography—has resulted in more precise and early diagnosis of numerous injuries. Most patients who are hemodynamically normal now can be managed nonoperatively. Simultaneously, a decrease in the incidence of gunshot wounds and stabbing injuries has occurred due to a reduction in personal violence, while improvements in automotive engineering have reduced traffic fatalities and confined more injuries to the extremities instead of the torso, based on the experiences of the authors of this article.

Work-hour restrictions have further limited residents’ opportunities to care for injured patients and elective surgical cases. Additionally, advances in laparoscopic surgery and endovascular techniques have reduced residents’ participation in more traditional, open surgical procedures. Taken together, these changes have significantly limited residents’ experience with the emergency life- and limb-saving operations necessary to care for injured patients.
Simulation has emerged as an educational modality to augment traditional experiential training in medicine. Several specialties have incorporated these new tools into resident training for learning outside the operating room. The American College of Surgeons (ACS) Program for Accredited Education Institutes is dedicated to educating trainees by using a variety of standardized, innovative teaching methods, including simulation. The American Board of Surgery has embraced the educational value of simulation offered by professional organizations with the requirement that candidates be certified in Advanced Trauma Life Support® and the Fundamentals of Laparoscopic Surgery before applying for the qualifying examination.

Course development

The ACS Committee on Trauma (COT) recognized the need to address the reduction in residents' operative experience when caring for injured patients during surgical training. In 2005, the ACS COT leadership established the Surgical Skills Committee, which was charged with developing a standardized, didactic, skills-based course that was designed to teach proper techniques for exposing organs to treat various injuries. The committee comprised nationally recognized experts in trauma care from the ACS.

The committee's first task was to define the course content. Each member submitted a description of either a life-threatening or limb-threatening injury to be considered for inclusion in the course. Using a modified Delphi process with a 90 percent consensus, the committee extracted a list of 50 injuries from these submissions, representing six anatomic regions: neck, thorax, abdomen, pelvis, retroperitoneum, and the extremities. Similar to the ACS Advanced Trauma Operative Management (ATOM) course, a modular format was selected for the course design. Each specific exercise in a module would begin with the presentation of a clinical scenario depicting the likely injuries: the Advanced Surgical Skills for Exposure in Trauma (ASSET) course.

Next, the instructor would present a narrated high-fidelity video demonstrating the pertinent anatomy and the technical maneuvers required for proper exposure of the specific injury. The instructor would then evaluate each student's performance of the procedure. In contrast to the ATOM course—

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### Table 1.
ASSET pre- and post-course self-assessments, instructor mean evaluation scores

<table>
<thead>
<tr>
<th>Body region/level</th>
<th>Pre-SEQ</th>
<th>Post-SEQ</th>
<th>Difference</th>
<th>Post-course evaluations by instructors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neck</td>
<td>2.76</td>
<td>3.69</td>
<td>0.93*</td>
<td>4.12</td>
</tr>
<tr>
<td>Chest</td>
<td>2.49</td>
<td>3.71</td>
<td>1.22*</td>
<td>4.03</td>
</tr>
<tr>
<td>Abdomen</td>
<td>3.28</td>
<td>4.00</td>
<td>0.72*</td>
<td>4.00</td>
</tr>
<tr>
<td>Pelvis</td>
<td>2.97</td>
<td>3.97</td>
<td>1.00*</td>
<td>4.02</td>
</tr>
<tr>
<td>Lower extremities</td>
<td>2.88</td>
<td>3.97</td>
<td>1.09*</td>
<td>4.07</td>
</tr>
<tr>
<td>Upper extremities</td>
<td>2.63</td>
<td>3.96</td>
<td>1.33*</td>
<td>3.93</td>
</tr>
<tr>
<td>PGY–4</td>
<td>2.71</td>
<td>3.78</td>
<td>1.07*</td>
<td></td>
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<tr>
<td>PGY–5</td>
<td>2.85</td>
<td>3.75</td>
<td>0.90*</td>
<td></td>
</tr>
<tr>
<td>PGY–6 or –7</td>
<td>3.03</td>
<td>4.10</td>
<td>1.07*</td>
<td></td>
</tr>
</tbody>
</table>

*P<.0001, n=79

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### Table 2.
ASSET course mean evaluation scores

<table>
<thead>
<tr>
<th>Course evaluation</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>New knowledge</td>
<td>4.80</td>
</tr>
<tr>
<td>New techniques</td>
<td>4.72</td>
</tr>
<tr>
<td>Better operative strategy</td>
<td>4.81</td>
</tr>
<tr>
<td>Better care injured patients</td>
<td>4.74</td>
</tr>
<tr>
<td>Satisfied with learning</td>
<td>4.84</td>
</tr>
<tr>
<td>Recommend course</td>
<td>4.91</td>
</tr>
</tbody>
</table>

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U.S. and Canadian ASSET training sites

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continued on page 34
Acknowledgements

The authors would like to acknowledge the significant contributions of many individuals to the ASSET course materials, ASSET Manual, and successful introduction of the ASSET Course.

John L. D. Atkinson, MD, FACS
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Walter L. Biffl, MD, FACS
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ATLS Program Manager
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San Diego, CA
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Springfield, MA
Enrique A. Guzman Cottallat, MD, FACS
Guayaquil, Ecuador
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Somererville, NJ
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Richmond, VA
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Edmonton, AB
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Administrative Director, Trauma Programs
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David H. Wisner, MD, FACS
Sacramento, CA
which assesses the student’s technical abilities to repair various injuries that have been simulated using a porcine model—the ASSET course assesses the student’s knowledge of anatomy and surgical skills to efficiently expose the injuries using a fresh, whole-body human cadaver.

The ASSET course is intended for senior surgery residents, fellows, and practicing community surgeons and can be completed in seven hours. Members of the committee created a student manual that includes educational objectives for each module. One chapter describes each of the 50 exposures and features color illustrations of the relevant anatomy, as well as a list of potential pitfalls. Each student receives a DVD that contains the videos illustrating each of the procedures.

A professional educator assisted with the development of various tools used to assess students’ prior experience, pre- and post-course self-efficacy, and perceptions of the course. Each student completes a survey that quantitates their previous operative experience. An additional questionnaire asks students to assess their ability to perform each of the operative exposures in the curriculum before and after completing the course.

A pretest was created to evaluate the student’s surgical and anatomic knowledge of the various exposures. After completing the course, students take a posttest. (The specific questions for the tests were created by the authors of each module and validated for content by the entire committee membership.) Finally, participants complete a 10-item questionnaire in which they are asked to rate the components of the course on a scale of 1 (poor) to 5 (excellent). The ACS Division of Education reviewed the course materials and evaluation tools and approved the ASSET course for continuing medical education credit.

Course assessment

The first ASSET course was offered in 2008 at the Uniformed Services University School of Medicine in Bethesda, MD. The faculty for this course and the subsequent courses were members of the COT Surgical Skills Committee. To further assess and refine the course format and content, five beta courses were presented from 2008 to 2010 at various educational centers. The sites included Northwestern Center for Advanced Surgical Education (n=2) in Chicago, IL; Stritch School of Medicine (Loyola University) (n=1) in Chicago; University of Nevada School of Medicine (n=1) in Las Vegas; and the University of Maryland School of Medicine (n=1) in Baltimore. Debriefing sessions at the end of each course provided valuable feedback on the course content, length of the course, and instructional materials. Each of the course evaluation tools also was revised based on statistical analysis of data from the beta sites. A total of 79 trainees (comprising PGY-4, PGY-5, and fellows), 36 from the U.S. and two international fellows, participated in the first five courses.

Data from the pre-course operative questionnaire confirm that senior surgical residents have a limited operative experience in trauma care during their training. The median number of trauma patients evaluated by participants was 250 and ranged from 20 to 2,000. Most (55 percent) of the trainees reported performing ≤1 procedures for 16
of the 29 procedures classified as trauma operations on the pre-course operative questionnaire. Trainee ratings of self-efficacy to perform surgical exposures in the six body regions increased from 2.84 before the course to 3.89 (1, low; 5, high) upon completion of the course. Ratings for each specific body region are summarized in Table 1, page 32. Instructors’ post-course evaluation of each participant’s ability to perform the various surgical exposures ranged from 3.93 to 4.12 (1, poor; 5, excellent) overall. The average rating for the post-course evaluation by the residents was 4.73 (range, 4.32 to 4.91), with a score of 5 signifying, “I would recommend this course to colleagues” (see Table 2, page 32).

Since 2010, the ACS COT Surgical Skills Committee has developed an instructor manual, a course director manual, and specific criteria needed to become a designated course site for the ASSET course. In 2010, ASSET became an official course of the ACS COT and is offered to senior surgical residents and fellows, as well as to practicing surgeons for continuing medical education credit. The Surgical Skills Committee oversees the ASSET and ATOM courses.

As of June, 83 ASSET courses have been completed across the U.S., encompassing more than 650 residents, fellows, and practicing surgeons who have completed the course. The course has also been promulgated to Canada, and plans are under way to introduce the ASSET course in other countries as well. More than 150 instructors have been trained, so ASSET is poised for continued growth. The figure on page 32 is a map of the U.S. and Canada representing states and provinces where ASSET training sites have been established.

If you are interested in registering for an ASSET course or offering an ASSET course at your institution, contact the ACS Trauma Department at asset@facs.org or by calling 312-202-5160.

References


2. Bittner JG, Hawkins ML, Medeiros RS, Beatty JS, Arterberry LR, Ferdinand CH, Mellinger JD. Non-operative management of solid organ injury diminishes surgical


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Dr. Bowyer is professor of surgery, chief, division of trauma and combat surgery; and director of surgical simulation, Uniformed Services University, Bethesda, MD.

Dr. Luchette is the Ambrose and Gladys Bowyer Professor of Surgery, Loyola University of Chicago, Maywood, IL.
STEWARDSHIP of our PROFESSION

AMERICAN COLLEGE OF SURGEONS ANNUAL

Clinical Congress

September 30–October 4, 2012
Chicago, IL
McCormick Place

Preliminary Program
Dear Colleagues,

I want to invite you to attend the American College of Surgeons 2012 Annual Clinical Congress, scheduled for September 30–October 4, 2012, at McCormick Place in Chicago, IL. The Congress will initiate our celebration of the 100-year anniversary of the founding of the American College of Surgeons. In 2012, as at the time of our founding, the Congress will promote high-quality educational programs designed to educate surgeons and directly improve the health and safety of surgical patients.

The Program Committee chaired by Valerie W. Rusch, MD, FACS, and the Division of Education, under the leadership of Ajit Sachdeva, MD, FACS, FRCSC, have put together an outstanding Scientific Program. Our President, Patricia Numann, MD, FACS, has designated her presidency year theme as Stewardship of Our Profession. In addition to other valuable educational efforts, various activities focusing on our profession will be highlighted. This includes a wide array of timely and important topics that are essential to delivery of surgical care of the highest quality. Among those are diverse Panel Sessions presented by experts from across the surgical specialties and nonsurgical disciplines, and Named Lectures delivered by top leaders in their fields. The Didactic and Skills-Oriented Postgraduate Courses will focus on important domains and will help attendees advance their knowledge and acquire new skills. Experiential, hands-on learning will be used to achieve the objectives of these courses.

The Scientific Program for the Clinical Congress will also include innovative research and surgical practices presented in Scientific Paper and Surgical Forum Sessions, as well as daily Scientific Poster Presentations. Timely Video-Based Education Presentations will highlight interesting surgical procedures from across the world. These sessions will be complemented by intimate, topic-specific Meet-the-Expert Luncheons and interactive Town Hall Meetings.

Attendees will be able to obtain certificates of verification following their participation in Postgraduate Courses and additional certificates will be provided for participation in specific sessions, which will meet requirements for Maintenance of Certification, Maintenance of Licensure, privileging, and credentialing. Many of our courses will have self-assessment continuing medical education credits this year, which are vital for the Maintenance of Certification (MOC) process.

The Clinical Congress Program has been arranged in thematic tracks that address content of interest to all surgical specialties, as well as specialty-based tracks that address the learning needs of various specialty groups. The stimulating educational content, which includes special opportunities to address regulatory requirements and interact with experts, and the ability to reconnect with professional colleagues make the 2012 Clinical Congress an essential meeting for all practicing surgeons, surgical residents, and members of surgical teams. On behalf of the American College of Surgeons, I look forward to welcoming you to Chicago for the 2012 Annual Clinical Congress.

With best regards,

J. David Richardson, MD, FACS
Chair, Board of Regents
Meeting Overview

What’s New in 2012?

Stewardship of Our Profession
- Centennial celebration launch
- Panel session with Joining Forces on how to help returning veterans
- Panel sessions focusing on ACS and surgical history
- Meet the Expert Luncheons focusing on MOC
- Informatics track
- New postgraduate courses offered:
  - Advanced Leadership Skills
  - Surgical Critical Care Board Review
  - Bundle Care and the Future of Surgical Health Care: Delivery and Outcomes
  - Management of Diabetic Lower Extremities
  - Trauma Techniques: From Top to Bottom
  - Advanced Skills Training for the Rural Surgeon: Complex Wound Care and Specialized Diagnostic Techniques
  - Telemedicine in Surgery: Building a Virtual Practice

Accreditation

The American College of Surgeons is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

AMA Credit Designation

The American College of Surgeons designates this live activity for a maximum of 29* AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

A maximum of 19 AMA PRA Category 1 Credits™ can also be earned through completion of Meet-the-Expert Luncheons and weekend postgraduate courses.

CME Certificates

On-site claiming of CME Certificates for nonticketed sessions (PS, NL, SF, VE, SP) will be issued at the My CME Connection booth located in the McCormick Place convention center, October 1–4, 2012. Additional CME certificates specific to patient safety, trauma, and ethics will be available on-site at the My CME booth.

Physicians are responsible for claiming CME credit for the Clinical Congress. Claims for CME credit for this event will be accepted until March 31, 2013.

Scientific Poster Presentations and Technical Exhibits

The Scientific Poster Presentations is a forum of more than 300 posters showcasing timely, innovative information, and findings on original scientific research, surgical procedures, practices, and approaches. The Scientific Poster Presentations will be located in the McCormick Place, West Building. Hours are 9:00 am–4:30 pm, Monday through Wednesday.

The Technical Exhibition comprises more than 200 companies displaying their products and services. The exhibition provides an excellent opportunity to explore the surgical marketplace by comparing products firsthand and planning purchases.

The Technical Exhibit hours are 9:00 am–4:30 pm, Monday through Wednesday. The exhibits are located in the McCormick Place, West Building.

Friends of Bill W.

Friends of Bill W. will meet Monday, October 1, through Wednesday, October 3, 7:00–8:30 pm at the Hilton Chicago.

Clinical Congress News

The official newspaper of the annual meeting, the Clinical Congress News, will be distributed at the Hilton Chicago and McCormick Place, West Building, each morning during Clinical Congress.

Convocation

Sunday, September 30, 6:00–8:00 pm McCormick Place, West Building

Conferral of Fellowship and Response of Behalf of New Fellows, Granting of Honorary Fellowships, Presentation of the Distinguished Service Award, Presentation of the Lifetime Achievement Award, Installation of Officers, and Presidential Address.

All Initiates of the ACS must register for the Clinical Congress if they wish to participate in Convocation. Confirmed ACS Initiates will be bestowed with Fellowship in the College during the ceremony regardless of their attendance at the event and may begin using the FACS designation upon the conclusion of the ceremony.

Cancellation of Sessions

The American College of Surgeons reserves the right to cancel any of the scientific sessions listed in this Program Planner. The information in this Program Planner is preliminary. Check the College’s website at www.facs.org/clincon2012 for updates.

Goal

The Clinical Congress is designed to provide individuals with a wide range of learning opportunities, activities, and experiences that will match their educational and professional development needs.

Objective

By the conclusion of the Clinical Congress, participants should gain and be able to apply the knowledge to improve their current practice, research, and care of surgical patients.

Opening Ceremony

Monday, October 1, 8:30–9:00 am McCormick Place, West Building

The Canadian and American national anthems are presented, along with a short video highlighting the new President’s theme for the year. The President presides and introduces the College Officers and Regents, Honorary Fellows, Past-Presidents, the recipient of the Distinguished Philanthropist Award, special invited guests from national and international health care organizations, the Resident Research Scholars, the Franklin Martin, C. James Carrico, and Louis C. Argenta Faculty Research Fellows, and the International Guest Scholars. The Martin Memorial Lecture, sponsored by the American Urological Association, follows immediately.

Annual Business Meeting of Members

Wednesday, October 3, 4:15–5:15 pm McCormick Place, West Building

- Reports from the Chair of the Board of Regents, the Chair of the Board of Governors, the Executive Director, and the ACS-SPAC Board Chair

- Presentation of the Resident Award for Exemplary Teaching and the Joan L. and Julius H. Jacobson II Promising Investigator Award

- Reports of the Nominating Committee of the Board of Governors and the Nominating Committee of the Fellows, and introduction of the President-Elect
The scientific program, scheduled in discipline- and theme-based tracks, will focus specifically on the needs of various surgical specialties and learner groups.

<table>
<thead>
<tr>
<th>SATURDAY</th>
<th>SUNDAY</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Surgery (GEN)</td>
<td>Basic / Translational Research (BTR)</td>
<td>Cardiothoracic Surgery (CTS)</td>
<td>Colon and Rectal Surgery (CRS)</td>
<td>Education / Outcomes and Safety (EDU)</td>
<td>Ethics (ETH)</td>
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<tr>
<td>Geriatric / Palliative Care (GER)</td>
<td>Health Policy: Practice Management / Reimbursement / Liability Issues (HP)</td>
<td>Informatics (INFO)</td>
<td>International (INT)</td>
<td>Neurosurgery (NEU)</td>
<td>Obstetrics and Gynecology (OBG)</td>
</tr>
<tr>
<td>Ophthalmic Surgery (OPHTHO)</td>
<td>Orthopaedic (ORT)</td>
<td>Otolaryngology–Head and Neck Surgery (OTO)</td>
<td>Pediatric Surgery (PED)</td>
<td>(PLA)</td>
<td>Plastic and Maxillofacial Surgery (PLA)</td>
</tr>
<tr>
<td>Residents / Medical Students (RES/MED)</td>
<td>Surgical Humanitarian Outreach (HUM)</td>
<td>Surgical Oncology (ONC)</td>
<td>Trauma / Critical Care (TRA)</td>
<td>Urology (URO)</td>
<td>Vascular Surgery (VAS)</td>
</tr>
</tbody>
</table>
MONDAY, OCTOBER 1

NL01 8:30–9:30 am
Opening Ceremony/Martin Memorial Lecture Sponsored by the American Urological Association: Surgical Innovation vs. Regulation
PRESIDING OFFICER: A. Brent Eastman, MD, FACS, San Diego, CA
INTRODUCER: Anthony Atala, MD, FACS, Winston-Salem, NC
LECTURER: Michael R. Harrison, MD, FACS, San Francisco, CA
Introduction of Honorary Fellows, recipient of the Distinguished Philanthropist Award, Officers, Regents, Past-Presidents, and special invited guests.
SPONSORED BY THE AMERICAN UROLOGICAL ASSOCIATION AND ALTERNATELY NOMINATED BY THE ACS ADVISORY COUNCIL FOR UROLOGICAL SURGERY AND THE ACS HONORS COMMITTEE

NL02 9:45–10:45 am
John H. Gibbon, Jr., Lecture: Critical Aortic Stenosis—Who Now Is Inoperable?
PRESIDING OFFICER AND INTRODUCER: Bryan F. Meyers, MD, FACS, St. Louis, MO
LECTURER: Robert A. Guyton, MD, FACS, Atlanta, GA
SPONSORED BY THE ADVISORY COUNCIL FOR CARDIOTHORACIC SURGERY

NL03 2:30–3:30 pm
Charles G. Drake History of Surgery Lecture: A Personal 50-Year Experience Relating to the FDA
PRESIDING OFFICER AND INTRODUCER: John L. D. Atkinson, MD, FACS, Rochester, MN
LECTURER: Thomas J. Fogarty, MD, FACS, Portola Valley, CA
SPONSORED BY THE ADVISORY COUNCIL FOR NEUROLOGICAL SURGERY

TUESDAY, OCTOBER 2

NL04 8:00–9:00 am
Herand Abcarian Lecture: Surviving Surgery, As a Career
PRESIDING OFFICER AND INTRODUCER: Thomas E. Read, MD, FACS, Burlington, MA
LECTURER: Ira J. Kodner, MD, FACS, St. Louis, MO
SPONSORED BY THE ADVISORY COUNCIL FOR COLON AND RECTAL SURGERY

NL05 9:45–10:45 am
Excelsior Surgical Society Edward D. Churchill Lecture: The Mass Production of Surgical Care
PRESIDING OFFICER AND INTRODUCER: E. Christopher Ellison, MD, FACS, Columbus, OH
LECTURER: Atul A. Gawande, MD, MPH, FACS, Boston, MA
SPONSORED BY THE ADVISORY COUNCIL FOR GENERAL SURGERY

NL06 12:45–1:30 pm
Scudder Oration on Trauma: Blunt Cerebrovascular Injuries: Anatomical and Pathologic Heterogeneity Creates Management Enigmas
PRESIDING OFFICER AND INTRODUCER: Michael F. Rotondo, MD, FACS, Greenville, NC
LECTURER: Timothy C. Fabian, MD, FACS, Memphis, TN
SPONSORED BY THE COMMITTEE ON TRAUMA

WEDNESDAY, OCTOBER 3

NL07 2:30–3:30 pm
Olga M. Jonasson Lecture: Peeking Behind the Curtain—Surgical Judgment Beyond Cognition
PRESIDING OFFICER AND INTRODUCER: Hilary A. Sanfey, MD, FACS, Springfield, IL
LECTURER: Carol-Anne Moulton, MB, BS, FRACS, MEd, PhD, Toronto, ON
SPONSORED BY THE WOMEN IN SURGERY COMMITTEE

NL08 8:00–9:00 am
Distinguished Lecture of the International Society of Surgery: Humanitarian Missions—Can One Surgeon Make a Difference?
PRESIDING OFFICER AND INTRODUCER: John R. Clarke, MD, FACS, Philadelphia, PA
LECTURER: Ari Leppäniemi, MD, PhD, Helsinki, Finland
SPONSORED BY THE U.S. CHAPTER OF THE INTERNATIONAL SOCIETY OF SURGERY

NL09 9:45–10:45 am
Ethics and Philosophy Lecture: The Grandest Challenge: Global Health
PRESIDING OFFICER AND INTRODUCER: Mark C. Weissler, MD, FACS, Chapel Hill, NC
LECTURER: Peter A. Singer, MD, MPH, FRSC, Toronto, ON
SPONSORED BY THE COMMITTEE ON ETHICS

NL10 12:45–1:45 pm
Commission on Cancer Oncology Lecture: 50 Years of Bowel Cancer Surgery—Tales of the Unexpected
PRESIDING OFFICER AND INTRODUCER: Stephen B. Edge, MD, FACS, Buffalo, NY
LECTURER: Richard John Heald, OBE, MCHIR, FRCS, Basingstoke, Hampshire, UK
SPONSORED BY THE COMMISSION ON CANCER

NL11 2:30–3:15 pm
I.S. Ravdin Lecture in Basic Sciences: Immunotherapy—An Emerging Concept in the Treatment of Sepsis
Presiding Officer and Introducer: Philip R. Schauer, MD, FACS, Cleveland, OH
LECTURER: Richard S. Hotchkiss, MD, St. Louis, MO
SPONSORED BY THE I.S. RAVDIN SURGICAL SOCIETY
POSTGRADUATE COURSES

POSTGRADUATE COURSES AND FEES

Only registered meeting attendees may purchase postgraduate course tickets. Seating capacities are limited, and ticket requests will be filled on a first-come, first-processed basis. All courses require a ticket for admission. Postgraduate course tickets may also be purchased on-site, subject to availability. No refunds for postgraduate courses will be accepted after September 15, 2012. However, tickets may be exchanged for another course prior to the start of the course and only if room is available.

<table>
<thead>
<tr>
<th>Description of fee categories</th>
<th>Requirement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fellow</td>
<td>A surgeon who is a Fellow of the College</td>
</tr>
<tr>
<td>Non-Fellow</td>
<td>A practicing physician who is not currently a member of the College</td>
</tr>
<tr>
<td>RAS</td>
<td>Associate Fellows, Resident Members, Medical Student Members, and Affiliate Members of the College</td>
</tr>
<tr>
<td>Non-RAS</td>
<td>A physician in training or member of the surgical team who is currently in an accredited training program or working in a surgical-related setting but has no affiliation with the College</td>
</tr>
</tbody>
</table>

* Passing grade of 75 percent or higher is required on the posttest.

ACS SYSTEM FOR VERIFICATION OF KNOWLEDGE AND SKILLS

The Board of Regents of the American College of Surgeons has approved a five-level model for verification and documentation of knowledge and skills by the Division of Education, following participation in the educational programs of the College. The model provides a framework for designing and implementing educational courses, based on principles of contemporary surgical education, and permits provision of appropriate documentation to the attendees.

The postgraduate didactic and skills-oriented courses offered at the Clinical Congress have been assigned verification levels I–III based on requirements of each level.

<table>
<thead>
<tr>
<th>Level</th>
<th>Requirement(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level I</td>
<td>Verification of attendance</td>
</tr>
<tr>
<td>Level II</td>
<td>Verification of satisfactory completion of course objectives</td>
</tr>
<tr>
<td>Level III</td>
<td>Verification of knowledge and skills</td>
</tr>
<tr>
<td>Level IV</td>
<td>Verification of preceptor experience</td>
</tr>
<tr>
<td>Level V</td>
<td>Verification of satisfactory patient outcomes</td>
</tr>
</tbody>
</table>

* Passing grade of 75 percent or higher is required on the posttest.

POSTGRADUATE COURSES VERIFICATION OF COMPLETION

All postgraduate courses (didactic and skills-oriented) with a designated verification level of II and III will hold a self-assessment component toward Maintenance of Certification (MOC) Part 2. All requirements of these postgraduate courses (as outlined above) must be completed to receive *AMA PRA Category 1 Credits™* and hours toward self-assessment.

Verification of completion of postgraduate courses will be posted to ACS members’ My CME Transcript, and certificates will be sent via e-mail to nonmembers six to eight weeks following the conclusion of Clinical Congress.
## POSTGRADUATE COURSES

**REGISTER ONLINE FOR THESE POSTGRADUATE SKILLS-ORIENTED AND DIDACTIC COURSES**

<table>
<thead>
<tr>
<th>Course code</th>
<th>Course title</th>
<th>Fellow</th>
<th>Non-Fellow</th>
<th>RAS</th>
<th>Non-RAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC01</td>
<td>Advanced Skills Training for the Rural Surgeon: Complex Wound Care and Specialized Diagnostic Techniques</td>
<td>$850</td>
<td>$980</td>
<td>$425</td>
<td>$490</td>
</tr>
<tr>
<td>SC02</td>
<td>Practical Applications of Ultrasound in the ICU: ECHO and Thoracic</td>
<td>$900</td>
<td>$1,040</td>
<td>$450</td>
<td>$520</td>
</tr>
<tr>
<td>SC03-A</td>
<td>Flexible Endoscopy for General Surgeons (Lecture Only)</td>
<td>$315</td>
<td>$365</td>
<td>$160</td>
<td>$185</td>
</tr>
<tr>
<td>SC03-B</td>
<td>Flexible Endoscopy for General Surgeons (Lecture + Hands-On Lab)</td>
<td>$975</td>
<td>$1,125</td>
<td>$490</td>
<td>$565</td>
</tr>
<tr>
<td>SC04</td>
<td>Surgical Education: Principles and Practice</td>
<td>$425</td>
<td>$490</td>
<td>$215</td>
<td>$245</td>
</tr>
<tr>
<td>SC05</td>
<td>Thyroid and Parathyroid Ultrasound</td>
<td>$1,275</td>
<td>$1,470</td>
<td>$640</td>
<td>$735</td>
</tr>
<tr>
<td>SC06</td>
<td>Advanced Colonoscopy: Polypectomy and Beyond</td>
<td>$690</td>
<td>$795</td>
<td>$345</td>
<td>$400</td>
</tr>
<tr>
<td>SC07</td>
<td>Fundamentals of Telemedicine for Surgeons</td>
<td>$585</td>
<td>$675</td>
<td>$290</td>
<td>$340</td>
</tr>
<tr>
<td>SC09-A</td>
<td>Laparoscopic Colectomy (Lecture Only)</td>
<td>$465</td>
<td>$535</td>
<td>$235</td>
<td>$270</td>
</tr>
<tr>
<td>SC09-B</td>
<td>Laparoscopic Colectomy (Lecture + Hands-On Lab)</td>
<td>$1,500</td>
<td>$1,725</td>
<td>$750</td>
<td>$865</td>
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<tr>
<td>SC10</td>
<td>Advanced Hepatopancreatobiliary (HPB) Ultrasound</td>
<td>$1,200</td>
<td>$1,380</td>
<td>$600</td>
<td>$690</td>
</tr>
<tr>
<td>SC11</td>
<td>Advanced Leadership Skills</td>
<td>$350</td>
<td>$400</td>
<td>$175</td>
<td>$200</td>
</tr>
<tr>
<td>SC12-A</td>
<td>Robotic Pelvic Surgery (Lecture Only)</td>
<td>$315</td>
<td>$365</td>
<td>$160</td>
<td>$185</td>
</tr>
<tr>
<td>SC12-B</td>
<td>Robotic Pelvic Surgery (Lecture + Hands-On Lab)</td>
<td>$1,200</td>
<td>$1,380</td>
<td>$600</td>
<td>$690</td>
</tr>
<tr>
<td>SC13</td>
<td>Basic Breast Ultrasound</td>
<td>$1,050</td>
<td>$1,210</td>
<td>$525</td>
<td>$605</td>
</tr>
<tr>
<td>PG14</td>
<td>Management of Diabetic Lower Extremities</td>
<td>$425</td>
<td>$490</td>
<td>$215</td>
<td>$245</td>
</tr>
<tr>
<td>PG15</td>
<td>Challenging Surgical Emergencies: What to Do in the Middle of the Night</td>
<td>$425</td>
<td>$490</td>
<td>$215</td>
<td>$245</td>
</tr>
<tr>
<td>PG16</td>
<td>Seven Keys to Coding Success for Surgeons (Basic)</td>
<td>$475</td>
<td>$545</td>
<td>$240</td>
<td>$275</td>
</tr>
<tr>
<td>PG17</td>
<td>Surgical Critical Care Board Review</td>
<td>$490</td>
<td>$565</td>
<td>$245</td>
<td>$280</td>
</tr>
<tr>
<td>PG18</td>
<td>Successful Surgical Coding and Compliance (Advanced)</td>
<td>$475</td>
<td>$545</td>
<td>$240</td>
<td>$275</td>
</tr>
<tr>
<td>PG19</td>
<td>Benign Anorectal Disease</td>
<td>$425</td>
<td>$490</td>
<td>$215</td>
<td>$245</td>
</tr>
<tr>
<td>PG20</td>
<td>General Surgery Review Course</td>
<td>$925</td>
<td>$1,065</td>
<td>$465</td>
<td>$535</td>
</tr>
<tr>
<td>PG21</td>
<td>High-Risk Breast Cancer Management from A to Z</td>
<td>$425</td>
<td>$490</td>
<td>$215</td>
<td>$245</td>
</tr>
<tr>
<td>PG23</td>
<td>Bundled Care and the Future of Surgical Health Care: Delivery and Outcomes</td>
<td>$380</td>
<td>$435</td>
<td>$190</td>
<td>$220</td>
</tr>
<tr>
<td>PG24</td>
<td>Trauma Techniques: From Top to Bottom</td>
<td>$450</td>
<td>$520</td>
<td>$225</td>
<td>$260</td>
</tr>
</tbody>
</table>

**PG16 & PG18 Coding Course Bundle** $850 $980 $425 $490
POSTGRADUATE SKILLS-ORIENTED COURSES

**SC01 Advanced Skills Training for the Rural Surgeon: Complex Wound Care and Specialized Diagnostic Techniques**

**TRACK:** EDU, GEN

8 credits, Verification Level II

Saturday, September 29 - 8:15 am – 5:45 pm

**CHAIR:** Amy L. Halverson, MD, FACS, Chicago, IL

**CO-CHAIR:** Philip R. Caropreso, MD, FACS, Keokuk, IA

Completion of a pretest, posttest, and/or skills report card is required for Verification Level II courses. Course capacity is limited to 24 and residents will be admitted on a case-by-case basis at the discretion of the course chair.

**PREREQUISITE:** Registrants must have completed the CD-ROM course, Ultrasound for Surgeons: The Basic Course, 2nd Edition. This CD-ROM may be ordered online or by phone. Please visit www.acs-resource.org for details.

This course will take place at an off-site location.

**SPONSORED BY THE DIVISION OF EDUCATION**

**FEE**

- FELLOW: $850
- NON-FELLOW: $980
- RAS: $425
- NON-RAS: $490

**SC02 Practical Applications of Ultrasound in the ICU: ECHO and Thoracic**

**TRACK:** EDU, TRA

8 credits, Verification Level II

Saturday, September 29 - 8:30 am – 5:30 pm

**CHAIR:** Amy C. Sisley, MD, FACS, MPH, Detroit, MI

**CO-CHAIR:** Randall S. Friese, MD, FACS, FCCM, Tucson, AZ

Completion of a pretest, posttest, and/or skills report card is required for Verification Level II courses. Course capacity is limited to 30 participants and four-year residents and fellows will be admitted on a case-by-case basis at the discretion of the course chair.

**PREREQUISITE:** Registrants must have completed the CD-ROM course, Ultrasound for Surgeons: The Basic Course, 1st or 2nd Edition. This CD-ROM may be ordered online or by phone. Please visit www.acs-resource.org for details.

**SPONSORED BY THE DIVISION OF EDUCATION**

**FEE**

- FELLOW: $850
- NON-FELLOW: $980
- RAS: $425
- NON-RAS: $490

**SC03 Flexible Endoscopy for General Surgeons**

**TRACK:** GEN

**LECTURE ONLY (SC03-A):** 4 credits, Verification Level II

Sunday, September 30 – 8:00 am–12:15 pm

**LECTURE AND HANDS-ON LAB (SC03-B):** 8 credits, Verification Level III

Sunday, September 30 – 8:00 am–5:30 pm

**CHAIR:** Jeffrey M. Marks, MD, FACS, Cleveland, OH

**CO-CHAIR:** Jose M. Martinez, MD, FACS, Miami, FL

Completion of a pretest, a posttest, and a skills report card is required for Verification Level III courses.

Course capacity for the hands-on lab (SC03-B) is limited to 75 participants.

**SPONSORED BY THE COMMITTEE ON EMERGING SURGICAL TECHNOLOGY AND EDUCATION**

**FEE**

- FELLOW: $315
- NON-FELLOW: $365
- RAS: $160
- NON-RAS: $185

**SC04 Surgical Education: Principles and Practice**

**TRACK:** EDU

6 credits, Verification Level I

Sunday, September 30 - 8:30 am–4:00 pm

**CHAIR:** Anne T. Mancino, MD, FACS, Little Rock, AR

**CO-CHAIR:** Guy F. Brisseau, MD, MEd, FACS, FAAP, FRCS, Halifax, NS

**SPONSORED BY THE DIVISION OF EDUCATION**

**FEE**

- FELLOW: $795
- NON-FELLOW: $1,125
- RAS: $490
- NON-RAS: $565

**SC05 Thyroid and Parathyroid Ultrasound**

**TRACK:** GEN, OTO

7 credits, Verification Level III

Monday, October 1 - 9:45 am–6:15 pm

**CHAIR:** Robert A. Sofferman, MD, FACS, Burlington, VT

**CO-CHAIR:** Lisa A. Orloff, MD, FACS, San Francisco, CA

Completion of a pretest, a posttest, and a skills report card is required for Verification Level III courses.

**PREREQUISITE:** Registrants must have completed the CD-ROM course, Ultrasound for Surgeons: The Basic Course, 1st or 2nd Edition. This CD-ROM may be ordered online or by phone. Please visit www.acs-resource.org for details.

Course capacity is limited to 60.

Registration for this course will close two weeks prior to Congress and there will be no on-site registration.

**SPONSORED BY THE NATIONAL ULTRASOUND FACULTY**

**FEE**

- FELLOW: $1,275
- NON-FELLOW: $1,470
- RAS: $640
- NON-RAS: $735

**SC06 Advanced Colonoscopy: Polypectomy and Beyond**

**TRACK:** CRS, GEN

4 credits, Verification Level II

Monday, October 1 - 1:00–5:15 pm

**CHAIR:** Peter W. Marcello, MD, FACS, Burlington, MA

**CO-CHAIR:** Toyooki Sonoda, MD, FACS, New York, NY

Completion of a pretest, posttest, and/or skills report card is required for Verification Level II courses.

Course capacity is limited to 24.

**SPONSORED BY THE ADVISORY COUNCIL FOR COLON AND RECTAL SURGERY**

**FEE**

- FELLOW: $690
- NON-FELLOW: $795
- RAS: $345
- NON-RAS: $400

**SC07 Fundamentals of Telemedicine for Surgeons**

**TRACK:** INFO

4 credits, Verification Level I

Monday, October 1 - 1:15–5:30 pm

**CHAIR:** Andrew R. Watson, MD, FACS, Halifax, NS

**CO-CHAIR:** Rifat Latifi, MD, FACS, Pittsburgh, PA

Course capacity is limited to 32.

**SPONSORED BY THE COMMITTEE ON INFORMATICS**

**FEE**

- FELLOW: $585
- NON-FELLOW: $675
- RAS: $290
- NON-RAS: $340
### SC09 Laparoscopic Colectomy

**Track:** GEN, CRS  
**Lecture Only (SC09-A):** 4 credits, Verification Level I  
**Tuesday, October 2 · 8:15 am–12:30 pm**  
**Lecture and Hands-on Lab (SC09-B):** 8 credits, Verification Level II  
**Tuesday, October 2 · 8:15 am–5:45 pm**  
**Chair:** Howard M. Ross, MD, FACS, FASCRS, Red Bank, NJ  
**Co-Chair:** Bradley R. Davis, MD, FACS, FASCRS, Cincinnati, OH  

Completion of a pretest, posttest, and/or skills report card is required for Verification Level II courses.  
Course capacity for the hands-on lab (SC09-B) is limited to 30.  
The hands-on lab portion will take place at an off-site location.  
Sponsored by the Advisory Council for Colon and Rectal Surgery and the Committee on Emerging Surgical Technology and Education  

**Lecture Only**  
**Fee:** Fellow $465, Non-Fellow $535, RAS $235, Non-RAS $270  

**Lecture and Hands-on Lab**  
**Fee:** Fellow $1,500, Non-Fellow $1,725, RAS $750, Non-RAS $865  

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### SC11 Advanced Leadership Skills

**Track:** EDU  
**4 credits, Verification Level I**  
**Tuesday, October 2 · 12:30–4:45 pm**  
**Chair:** Bruce L. Gewertz, MD, FACS, Los Angeles, CA  
**Co-Chair:** Julie A. Freischlag, MD, FACS, Baltimore, MD  

Sponsored by the Division of Education  

**Fee**  
Fellow $350, Non-Fellow $400, RAS $175, Non-RAS $200  

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### SC12 Robotic Pelvic Surgery

**Track:** EDU, OBG, URO  
**Lecture Only (SC12-A):** 4 credits, Verification Level I  
**Wednesday, October 3 · 8:00 am–12:00 noon**  
**Lecture and Hands-on Lab (SC12-B):** 8 credits, Verification Level II  
**Wednesday, October 3 · 8:00 am–5:30 pm**  
**Chair:** Pier C. Giulianotti, MD, FACS, Chicago, IL  
**Co-Chair:** Ronney Abaza, MD, FACS, Columbus, OH  

Completion of a pretest, posttest, and/or skills report card is required for Verification Level II courses.  
Course capacity for the hands-on lab (SC12-B) is limited to 16.  
**Prerequisite:** Registrants must complete a prescreening survey  
This course will take place at UIC.  
Sponsored by the Advisory Council for Urology and the Committee on Emerging Surgical Technology and Education  

**Lecture Only**  
**Fee:** Fellow $315, Non-Fellow $365, RAS $160, Non-RAS $185  

**Lecture and Hands-on Lab**  
**Fee:** Fellow $1,200, Non-Fellow $1,380, RAS $600, Non-RAS $690  

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### SC13 Basic Breast Ultrasound

**Track:** EDU  
**7.5 credits, Verification Level II**  
**Wednesday, October 3 · 8:00 am–5:00 pm**  
**Chair:** Edward J. Donahue, MD, FACS, Phoenix, AZ  
**Co-Chair:** Darius S. Francescatti, MD, FACS, Chicago, IL  

Completion of a pretest, posttest, and/or skills report card is required for Verification Level II courses.  
Course capacity is limited to 60.  
**Prerequisite:** Registrants must have completed the CD-ROM course, Ultrasound for Surgeons: The Basic Course, 1st or 2nd Edition.  
This CD-ROM may be ordered online or by phone. Please visit www.acs-resource.org for details.  
Sponsored by the National Ultrasound Faculty  

**Fee**  
Fellow $1,050, Non-Fellow $1,210, RAS $525, Non-RAS $605  

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For the most current and complete information regarding the Annual Clinical Congress, including a comprehensive listing of all the Panel Sessions, Video-based Education Sessions, Surgical Forum Sessions, Scientific Paper Sessions, Scientific Poster Sessions, Town Halls, and Centennial Celebration sessions, go to  

http://www.facs.org/clincon2012/
## POSTGRADUATE DIDACTIC COURSES

<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Title</th>
<th>Credits</th>
<th>Verification Level</th>
<th>Track</th>
<th>Dates</th>
<th>Chair(s)</th>
<th>Co-Chair(s)</th>
<th>Sponsor</th>
<th>Fee</th>
<th>Coders Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>PG14</td>
<td>Management of Diabetic Lower Extremities</td>
<td>6</td>
<td>I</td>
<td>GEN, PLA, VAS</td>
<td>Saturday, September 29 · 9:00 am–4:30 pm</td>
<td>Lawrence B. Colen, MD, FACS, Norfolk, VA</td>
<td>Christopher E. Attinger, MD, FACS, Washington, DC</td>
<td>Sponsored by the Advisory Council on Plastic and Maxillofacial and the Advisory Council on Vascular Surgery</td>
<td>Fellow: $425, Non-Fellow: $490</td>
<td>RAS: $215, Non-RAS: $245</td>
</tr>
<tr>
<td>PG15</td>
<td>Challenging Surgical Emergencies: What to Do in the Middle of the Night</td>
<td>6</td>
<td>I</td>
<td>GEN, TRA</td>
<td>Saturday, September 29 · 9:30 am–5:00 pm</td>
<td>Grace S. Rozycki, MD, FACS, Atlanta, GA</td>
<td>Joseph B. Cofer, MD, FACS, Chattanooga, TN</td>
<td>Sponsored by the Program Committee and the Advisory Council for General Surgery</td>
<td>Fellow: $425, Non-Fellow: $490</td>
<td>RAS: $215, Non-RAS: $245</td>
</tr>
<tr>
<td>PG16</td>
<td>Seven Keys to Coding Success for Surgeons (Basic)</td>
<td>6</td>
<td>I</td>
<td>HP</td>
<td>Saturday, September 29 · 10:00 am–5:30 pm</td>
<td>Albert Bothe, Jr., MD, FACS, Danville, PA</td>
<td>Pamela A. Howard, MD, MBA, FACS, CIME, Little Rock, AR</td>
<td>Discounted rates available for Coding Course Bundle (PG16 &amp; PG18). Sponsored by the General Surgery Coding and Reimbursement Committee</td>
<td>Fellow: $425, Non-Fellow: $490</td>
<td>RAS: $215, Non-RAS: $245</td>
</tr>
<tr>
<td>PG17</td>
<td>Surgical Critical Care Board Review</td>
<td>7</td>
<td>II</td>
<td>GEN, TRA</td>
<td>Sunday, September 30 · 8:00 am–4:30 pm</td>
<td>Heidi L. Frankel, MD, FACS, Baltimore, MD</td>
<td>Hasan B. Alam, MD, FACS, Boston, MA</td>
<td>Sponsored by the Program Committee and Committee on Trauma</td>
<td>Fellow: $490, Non-Fellow: $565</td>
<td>RAS: $245, Non-RAS: $280</td>
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<tr>
<td>PG18</td>
<td>Successful Surgical Coding and Compliance (Advanced)</td>
<td>6</td>
<td>I</td>
<td>HP</td>
<td>Sunday, September 30 · 9:00 am–4:30 pm</td>
<td>Chad A. Rubin, MD, FACS, Columbia, SC</td>
<td>Mark T. Savarise, MD, FACS, Sandpoint, ID</td>
<td>Discounted rates available for Coding Course Bundle (PG16 &amp; PG18). Sponsored by the General Surgery Coding and Reimbursement Committee</td>
<td>Fellow: $475, Non-Fellow: $545</td>
<td>RAS: $240, Non-RAS: $275</td>
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<tr>
<td>PG19</td>
<td>Benign Anorectal Disease</td>
<td>6</td>
<td>I</td>
<td>CRS, GEN</td>
<td>Monday, October 1 · 9:45 am–5:15 pm</td>
<td>William D. Buie, MD, FACS, Calgary, AB</td>
<td>Kirsten B. Wilkins, MD, FACS, Edison, NJ</td>
<td>Sponsored by the Program Committee and the Advisory Council on Colon and Rectal Surgery</td>
<td>Fellow: $425, Non-Fellow: $490</td>
<td>RAS: $215, Non-RAS: $245</td>
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<tr>
<td>PG20</td>
<td>General Surgery Review Course</td>
<td>12</td>
<td>II</td>
<td>GEN</td>
<td>Monday, October 1 · 10:00 am–5:30 pm</td>
<td>Eugene F. Foley, MD, FACS, Madison, WI</td>
<td>Robert C. McIntyre, Jr., MD, FACS, Aurora, CO</td>
<td>Sponsored by the Division of Education</td>
<td>Fellow: $925, Non-Fellow: $1,065</td>
<td>RAS: $465, Non-RAS: $535</td>
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<td>PG21</td>
<td>High-Risk Breast Cancer Management from A to Z</td>
<td>6</td>
<td>I</td>
<td>ONC, GEN</td>
<td>Tuesday, October 2 · 9:00 am–4:30 pm</td>
<td>V. Suzanne Klimberg, MD, FACS, Little Rock, AR</td>
<td>Jon M. Greif, DO, FACS, Oakland, CA</td>
<td>Sponsored by the Program Committee</td>
<td>Fellow: $425, Non-Fellow: $490</td>
<td>RAS: $215, Non-RAS: $245</td>
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6 credits, Verification Level II
TRACK: GEN, VAS
Wednesday, October 3 · 8:00 am–3:30 pm
CHAIR: Sean P. Lyden, MD, FACS, Cleveland, OH
CO-CHAIR: Mark M. Levy, MD, FACS, Richmond, VA
SPONSORED BY THE ADVISORY COUNCIL ON VASCULAR SURGERY
FEE FELLOW ....$430  NON-FELLOW ...... $495
       RAS ........ $215  NON-RAS .......... $245

P3A3 Bundled Care and the Future of Surgical Health Care: Delivery and Outcomes
6 credits, Verification Level I
TRACK: EDU, HP
Wednesday, October 3 · 8:30 am–4:00 pm
CHAIR: Mohsen Shabahang, MD, PhD, FACS, Danville, PA
CO-CHAIR: Frank G. Opelka, MD, FACS, Washington, DC
SPONSORED BY THE DIVISION OF EDUCATION
FEE FELLOW ....$380  NON-FELLOW ...... $435
       RAS ........ $190  NON-RAS .......... $220

P3A4 Trauma Techniques: From Top to Bottom
6 credits, Verification Level I
TRACK: GEN, TRA
Wednesday, October 3 · 9:00 am–4:30 pm
CHAIR: Demetrios Demetriades, MD, FACS, Sierra Madre, CA
CO-CHAIR: Thomas M. Scalea, MD, FACS, Baltimore, MD
SPONSORED BY THE COMMITTEE ON TRAUMA
FEE FELLOW ....$450  NON-FELLOW ...... $520
       RAS ........ $225  NON-RAS .......... $260

For the most current and complete information regarding the Annual Clinical Congress, including a comprehensive listing of all the Panel Sessions, Video-based Education Sessions, Surgical Forum Sessions, Scientific Paper Sessions, Scientific Poster Sessions, Town Halls, and Centennial Celebration sessions, go to
http://www.facs.org/clincon2012/
**MEET-THE-EXPERT LUNCHEONS**

Converse with experts on selected topics over an informal lunch. There will be no formal presentations or A/V provided during these luncheons. Case-based discussions will be encouraged. The cost for each luncheon is $45. The luncheons will be from 1:15 to 2:15 pm on Monday and from 11:30 am to 12:30 pm on Tuesday and Wednesday.

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<th>Monday, October 1, 1:15 – 2:15 pm</th>
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**Wednesday, October 3, 11:30 am – 12:30 pm**

| ME301 | Office Ultrasound: How to Do It and How to Get Paid for It by Cord Sturgeon, MD, FACS, Chicago, IL |
| ME302 | Surgery for Metastatic Thyroid Cancer in Cervical Lymph Nodes by Keith S. Heller, MD, FACS, New York, NY |
| ME303 | How to Close the Open Abdomen by Timothy C. Fabian, MD, FACS, Memphis, TN |
| ME304 | Diverticulitis Decision-Making for the Acute Care Surgeon by Laurence F. Yee, MD, FACS, Richmond, VA |
| ME305 | Choosing the Correct Bariatric Procedure by Ninh T. Nguyen, MD, FACS, Orange, CA |
| ME306 | Prostate Cancer by William J. Catalona, MD, FACS, Chicago, IL |
| ME307 | Challenges and Solutions in Modern Parathyroidectomy by David J. Terris, MD, FACS, Augusta, GA |
| ME308 | Rectal Prolapse: Choosing the Best Operation by Linda M. Farkas, MD, FACS, Raleigh, NC |
| ME309 | How to Succeed at MOC by Mark A. Malangoni, MD, FACS, Philadelphia, PA |
| ME310 | Laparoscopic Colectomy: Moving Up the Learning Curve by Orucu Bardakcioglu, MD, FACS, St. Louis, MO |
| ME311 | Anorectal Abscesses and Fistulae by Herand Abcapan, MD, FACS, Chicago, IL |
| ME312 | Treatment of Severe Pancreatitis by Grant E. O’Keefe, MD, FACS, Seattle, WA |
| ME313 | Pilonidal Cysts, Abscesses, and Fistulae: What to Do? by Michael A. Buckmir, MD, FACS, Chandler, AZ |
| ME314 | Creating Functional Ostialomies: Tips and Tricks by Bruce A. Grink, MD, FACS, Boston, MA |
| ME315 | Surgical Malpractice 101: Primer on Being an Effective Expert Witness and Tips on Avoiding Being Sued Yourself by Craig S. Benkay, MD, FACS, Norfolk, VA |
| ME316 | Careers in Rural Surgery by Tyler G. Hughes, MD, FACS, McPherson, KS |
| ME317 | Thyroid Cancer for the Practicing Clinician by Dennis H. Kraus, MD, FACS, New York, NY |
SPECIAL INTEREST SESSIONS

Please note: These are non-CME designated sessions unless otherwise indicated.

SUNDAY, SEPTEMBER 30

Medical Student Program

Day I: 12:00 noon–6:00 pm

The Division of Education invites students from all four years of medical school to attend Clinical Congress and to participate in this program designed specifically for those considering a career in surgery. Programming is varied from day to day, and students are welcome to attend all or selected portions of this three-day program. The program is free to ACS Medical Student members who register in advance. Nonmembers will be charged a nominal registration fee.

Topics include optimizing each year in medical school to prepare for a surgical residency, choosing the surgical discipline that best suits one’s personality, and navigating the residency application process and interviewing successfully.

Speakers include College leaders, surgical educators at both the medical student and resident levels, and residents. Students are able to hone their interviewing skills through an interactive session with surgeons, as well as network with specialty surgeons, surgical residents, residency program directors, and others.

Also incorporated in this program is the Medical Student Program Poster Session, during which 40 medical students present their research in one of three areas: clinical, basic science, or educational research. Resident and surgeon volunteers critique these presentations, and winners are formally recognized during the program.

Students enrolled in a U.S., Canadian, or international allopathic or osteopathic medical school are invited to attend this comprehensive program. For regularly updated information about the Medical Student Program and the Medical Student Program Poster Session, visit www.facs.org/clincon2012/special/medicalstudent.html. For additional information, please contact Ms. Krashina Hudson at khudson@facs.org or 312-202-5335.

Resident and Associate Society Symposium

1:00–4:00 pm

Surgery at the End of Life: For Love or Money?
The 2012 RAS Symposium will discuss the complex situation of surgery at the end of life. Surgery, whether in the setting of an acute problem or terminal condition, can be emotionally charged, resource intensive, and ethically complex. Opinions may differ between patients and their families as well as between physicians and surgeons involved in complex patient care. These issues become compounded in the context of health care reform, outcomes tracking, and cost awareness. What leads to patient and surgeon frustration in these situations? What factors are important to discuss with patients and families faced with difficult surgical decisions? How do patients and surgeons make decisions regarding end-of-life surgery? Join us for a panel discussion composed of invited expert speakers as well as winners of the Issues Committee Essay Competition. This session will be followed by audience questions and interaction. For additional information, contact Peg Haar at phaar@facs.org or 312-202-5312.

Please refer to the registration section of the ACS website at www.facs.org/clincon2012/registration.

MONDAY, OCTOBER 1

Now That You Want to Become a Surgeon: Strategies for Success—A Special Program for Medical Students

9:45 am–12:00 noon

Join residency program administrators, program directors, and surgical residents as they present a program designed specifically for medical students. Programming will be offered for students at all levels. Topics will include mastering the residency interview process and evaluating potential programs, and preparing oneself personally and professionally for the transition from medical school to residency.

SPONSORED BY THE ASSOCIATION OF PROGRAM DIRECTORS IN SURGERY, THE ASSOCIATION OF RESIDENCY COORDINATORS IN SURGERY, AND THE AMERICAN COLLEGE OF SURGEONS

Surgery Resident Program

Essential Skills for Surgical Practice: A Primer for Residents

10:00 am–4:00 pm

The Division of Education invites surgery residents from all postgraduate year levels to participate in a special program designed to assist surgical residents with essential nonclincial issues they face during residency training and the transitional period to their post-training careers. Topics will include job hunting tips, managing professional liability risk, negotiating a first contract, attaining a successful work/life balance, and more. Speakers will include not only leaders from surgery, but also a certified financial planner, an attorney with extensive professional liability experience, and an expert in physician career development.

For additional information, please contact Ms. Cheryllyn Sherman at csherman@facs.org or 312-202-5424 or go to www.facs.org/education/essentialskills.html. Please register online for this special program at www.facs.org/clincon2012/registration.

Medical Student Program

Day II: 1:00–6:00 pm

For a full description of this program, please refer to the Sunday schedule. Note that programming is varied from day to day, and students are welcome to attend all or selected portions of this three-day program.

For regularly updated information about the Medical Student Program and the Medical Student Program Poster Session, visit www.facs.org/clincon2012/special/medicalstudent.html.

Cardiothoracic Surgery in the Future: Technology Overview for Residents and Medical Students

5:30–9:00 pm  Fee: $25 (includes dinner)

COUSE DIRECTORS:
Thomas E. MacGillivray, MD, FACS, Boston, MA
James I. Fann, MD, FACS, Stanford, CA

This course will introduce surgery residents and medical students to conventional and complex procedures performed by cardiothoracic surgeons today and provide information about upcoming new technologies and the six-year integrated cardiothoracic surgery training program. The primary focus of the session will be hands-on experience with specific cardiothoracic surgical procedures. Participants will experience and have the opportunity to perform these surgical procedures using synthetic and tissue-based simulation models. The program will be taught by cardiothoracic surgeons who are leaders in their respective fields of cardiac and general thoracic surgery. (Buffet dinner available at 5:30 pm)

SPONSORED BY THE AMERICAN COLLEGE OF SURGEONS AND THE SOCIETY OF THORACIC SURGEONS

Please refer to the registration section of the ACS website at www.facs.org/clincon2012/registration.
TUESDAY, OCTOBER 2

Town Hall Meetings
7:00–7:45 am

TH01: The Survival of General Surgery in 2012 and Beyond
SPONSORED BY THE ADVISORY COUNCIL FOR GENERAL SURGERY

TH02: Modern Surgical Education and Increasing Fail Rates for the Boards: What Are We To Do?
SPONSORED BY THE RESIDENT AND ASSOCIATE SOCIETY

TH03: Palliative Care: Surgesons Wanted!
SPONSORED BY THE TASK FORCE ON SURGICAL PALLIATIVE CARE

TH04: Addressing Hospital Needs with ACS NSQIP®
SPONSORED BY THE DIVISION OF RESEARCH AND OPTIMAL PATIENT CARE

TH05: How Washington Is Affecting Your Practice and Your Patients
SPONSORED BY THE HEALTH POLICY AND ADVOCACY GROUP

TH06: Contracts
SPONSORED BY THE COMMITTEE ON SURGICAL PRACTICES

Posters of Exceptional Merit Presentation
11:30 am–12:30 pm

All attendees are invited to join in a lunchtime tour and discussion of the Posters of Exceptional Merit facilitated by Program Committee Chair Valerie W. Rusch, MD, FACS. More than 300 posters will be on display at the Clinical Congress, but only a select few are designated Posters of Exceptional Merit. Come hear the authors of these distinguished works present their innovative research and answer questions prior to the judges awarding one poster the title of Best Scientific Poster.

Medical Student Program
Day III: 1:00–6:00 pm

For a full description of this program, please refer to the Sunday schedule. Note that programming is varied from day to day, and students are welcome to attend all or selected portions of this three-day program.

Chapter Showcase
2:30–4:00 pm

Best Practices—How We Do It
Re-inventing “wheels” takes time and energy, and in the end, the wheel may not run as smoothly as you had planned. This session will be about the wheels that chapters employ to present successful education programs and manage chapter finances effectively. This year, the following best practices will be presented:
• Getting Residents Involved!
• The New Chapter Membership Benefit: Providing CME for Members’ MOC
• Financial Control Is Easy!
• Strategic Planning? Strategic Future!

2012 Excellence in Research Awards/Distribution/Surgical Forum Dedication
2:30–5:45 pm

Orthopaedic Surgery, Neurosurgery, Obstetrics and Gynecology

Before the scientific presentations, the Committee for the Forum on Fundamental Surgical Problems will distribute 12 awards for excellence in research, and the 63rd volume of the Owen H. Wangensteen Surgical Forum will be dedicated to Michael R. Harrison, MD, FACS, San Francisco, CA. Introduction will be made by Michael T. Longaker, MD, FACS, with remarks from Dr. Harrison immediately following. Surgical residents and their mentors are encouraged to attend the awards distribution/dedication.

Ninth Annual Rural Surgeons Open Forum and Oweida Scholarship Presentation
4:15–5:45 pm

The session opens with the introduction of the 2012 Nizar N. Oweida Scholarship recipient, Stephanie Allen Lilly, MD, FACS, a rural general surgeon practicing in Berlin, NH. The Advisory Council for General Surgery’s Committee on Rural Surgery sponsors this open forum to enable direct communication between rural general surgeons and a panel comprised of leaders of the American surgical profession. Representatives from the Board of Regents, the Board of Governors, the executive staff, and the ACS Health Policy Research Institute have been invited to participate.

As health care reform continues to evolve, and in light of the Supreme Court’s decision on the Patient Protection and Affordable Care Act (PPACA), the panelists want to hear of your experiences and recommendations. The surgical workforce and its effect on the rural surgeon will be discussed.

This open forum is for all surgeons who believe that rural general surgeons are valuable to both the College and health care in America.

THURSDAY, OCTOBER 4

Town Hall Meetings
7:00–7:45 am

TH11: Resolving Controversies in Cancer Care: American College of Surgeons Clinical Research Program—An Expert Forum and Open Discussion
SPONSORED BY THE CLINICAL RESEARCH PROGRAM

TH12: Maintenance of Certification: Is It Really Worth It?
SPONSORED BY THE COMMITTEE ON SURGICAL PRACTICES

WEDNESDAY, OCTOBER 3

Town Hall Meetings
7:00–7:45 am

TH07: Humanism in the Operating Room: Methods to Develop and Promote the Surgeon’s Role in Delivering Patient-Centered Care
SPONSORED BY OPERATION GIVING BACK, RESIDENT AND ASSOCIATE SOCIETY, AND WOMEN IN SURGERY COMMITTEE

TH08: How to Initiate a Translational Research Academic Surgical Career
SPONSORED BY THE COMMITTEE FOR THE FORUM ON FUNDAMENTAL SURGICAL PROBLEMS

TH09: An Update on the Bariatric Accreditation Program
SPONSORED BY THE DIVISION OF RESEARCH AND OPTIMAL PATIENT CARE

TH10: Do Structures and Processes Lead to Better Outcomes in Trauma Care?
SPONSORED BY THE COMMITTEE ON TRAUMA

TH15: Working with the American College of Surgeons to Improve Diversity
SPONSORED BY THE WOMEN IN SURGERY COMMITTEE

TH16: Ethics Teaching in Surgical Residency Programs: Are We Doing the Best We Can?
SPONSORED BY THE COMMITTEE ON ETHICS

TH17: Why Would a Surgeon Be a Member of Both a Specialty Surgery Association and the ACS?
SPONSORED BY: COMMITTEE ON SURGICAL PRACTICES
AIR TRANSPORTATION

The ACS has arranged special meeting discounts on United Airlines. These special discounts are available by booking with United directly (independently or through a travel agent). Be sure to reference the ACS Z Code and authorization number below to obtain the special fares.

United Airlines
800-521-4041
7:00 am–9:00 pm CST; Monday–Friday
8:00 am–6:00 pm CST; Saturday–Sunday

Z Code: ZMXH
Authorization Number: 479578
www.united.com

Purchase your ticket online at united.com and receive a discount off the lowest applicable fares. When booking online, please enter ZMXH479578 to receive your discount.

CAR RENTAL

Avis is designated as the official car rental company for the 2012 Clinical Congress. Special meeting rates and discounts are available on a wide selection of GM and other fine cars. To receive these special rates, be sure to mention your Avis Worldwide Discount (AWD) number when you call.

Avis Reservations
800-331-1600
www.avis.com
AWD Number: B169699

CHILD POLICY

The ACS policy regarding children is as follows:
- Under 12 not permitted on Social Program tours
- Under 16 not permitted on exhibit floor or in scientific sessions
- 16 and over must have a badge to enter exhibit area or meeting rooms

This policy includes infants in strollers and arms.

CAMP ACS

The American College of Surgeons is once again partnering with ACCENT on Children’s Arrangements, Inc. to provide an exciting on-site children’s camp in Chicago. ACCENT has prepared an exciting program with activities such as arts and crafts and active games designed to entertain your children while you are attending meetings and sessions. The camp, which is offered to all children ages six months through 17 years, will be located at the Hilton Chicago. For more information on Camp ACS, please visit our website at www.facs.org/clincon2012/social/campacs.html.

AFFILIATE GROUP FUNCTIONS

Groups planning a social function or business meeting to be held in conjunction with the Clinical Congress will need to make arrangements through ACS. For more information and to request function space, requests can be made online at web2.facs.org/meetings/events or contact Marisa Villalba, Senior Meeting Planner, ACS Convention and Meetings, at mvillalba@facs.org.
INTERNATIONAL ATTENDEES

Visa Information
International Fellows, guest physicians, and meeting attendees: The process of obtaining a visa to attend meetings in the U.S. takes much longer than it used to. You are strongly urged to apply for a visa as early as possible, preferably at least 60 days before the start of the meeting. For detailed information regarding obtaining a visa, visit travel.state.gov/visa/temp/types/types_1262.html. For information regarding the Visa Waiver Program (VWP), please visit http://travel.state.gov/visa/temp/without/without_1990.html.

You may request a letter from the College welcoming you to the meeting when you register online for the meeting. You may obtain a letter from the College welcoming you to the meeting when you click on www.facs.org/clincon2012/attendees/visa.html.

SHUTTLE BUS SERVICE
Complimentary shuttle bus service will be provided for all registrants at regular intervals between the McCormick Place, West Building, and most designated ACS Clinical Congress hotels. For a list of hotels on the shuttle route, please refer to the Housing Information section. Schedules and routes will be available at the convention center and participating hotels.

NURSING MOTHER’S ROOM
A nursing mother’s room will be available during the meeting and will be located on the first floor of McCormick Place, West Building, First Aid Room (Shuttle Bus Transportation Lobby).

HELP AND INFORMATION CENTER
The Help and Information Center will be located at McCormick Place, West Building, and will be available during registration hours. Assistance with general information, travel, housing, and local information will be available.

PRAYER ROOM
A prayer room will be available during the meeting. The exact location will be provided in the program book distributed at the meeting.

LOST AND FOUND
Lost-and-found areas will be located in the ACS Convention Office at the Hilton Chicago and in the Convention and Exhibit Office at McCormick Place, West Building. Persons looking for or finding lost items should contact one of these offices.
WHO SHOULD ATTEND AND WHAT’S INCLUDED?

Registration is open to all physicians and individuals in the health care field and includes a name badge, program book, and entrance to the exhibits and all sessions,* other than postgraduate courses and Meet-the-Expert Luncheons. To review the full registration policies and submit your 2012 Clinical Congress registration, please visit our website at www.facs.org/clincon2012/registration.

*The following sessions are included with your Clinical Congress registration and are not ticketed. Registering for these sessions does not guarantee seating within the course. Seating is provided on a first-come, first-served basis until the meeting room is full.

- Named Lectures
- Panel Sessions
- Scientific Exhibits
- Surgical Forum
- Scientific Paper
- Town Hall Meetings
- Video-Based Sessions

REGISTRATION AND MEMBERSHIP QUESTIONS

If you have any questions regarding Clinical Congress registration, please contact Registration Services. Phone registrations are not accepted.

E-MAIL: registration@facs.org
PHONE: 312-202-5244
FAX: 312-202-5003

If you have any questions regarding your ACS membership prior to registering for the Clinical Congress, please contact Member Services at the appropriate number below.

FELLOW DUES AND STATUS 877-277-0036
ASSOCIATE FELLOW, RESIDENT, MEDICAL STUDENT, AND AFFILIATE MEMBERS 800-293-4029

For information on becoming a member of the College and to download an application, please visit www.facs.org/memberservices/documents.html. You may also contact Cynthia Hicks, Credentials Section, Division of Member Services, at 800-293-9623 or chicks@facs.org.

Registration Fees* and Credentials

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<th>8/7–9/29</th>
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<td>Commercial representatives may obtain the commercial registration form by e-mailing a request to <a href="mailto:registration@facs.org">registration@facs.org</a>.</td>
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<td>--- Retired Fellows fall under the ACS Fellow registration category for the Clinical Congress. Applicable registration fees apply.</td>
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<td>*Nonmembers who pay the applicable registration fees will have their membership application fees waived if they apply for membership by December 31, 2012. The American College of Surgeons is pleased to offer discounted registration fees for residents and medical students. Please submit a letter verifying your educational status with the completed registration form to expedite processing. Residents should obtain a letter from their program director; students should contact their department chairs.</td>
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<td>†Resident and Medical Student Membership</td>
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<td>The College has membership opportunities for medical students and residents. Medical students must be attending a U.S., Canadian, or international allopathic or osteopathic medical school. There is a one-time fee of $20, which covers all four years of medical school. Membership will expire upon graduation from medical school. Residents enrolled in a program accredited by the Accreditation Council for Graduate Medical Education or surgeons in surgical research or fellowship programs acceptable to the American College of Surgeons are eligible for Resident Membership. The application fee of $20 is waived for first-year residents. Annual dues thereafter are also $20. Nonmember medical students and residents who register for this meeting and meet the appropriate membership category requirements will be contacted to affirm their membership status.</td>
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ACS Fellow (2012 dues paid)~ $150 $200 $275
Initiate No Fee No Fee No Fee
Associate Fellow $150 $200 $275
Resident Member No Fee No Fee No Fee
Medical Student Member No Fee No Fee $15
Affiliate Member $45 $95 $170
Guest Physician* $610 $660 $735
Resident Nonmember (with verification letter†) $45 $45 $75
Medical Student Nonmember (with verification letter†) $25 $25 $35
Hospital Administrator (nonphysician)* $450 $500 $575
Hospital Purchasing Agent* $350 $400 $475
Medical Association Personnel* $350 $400 $475
Nurse Nonmember* $350 $400 $475
Surgeon Assistant Nonmember* $350 $400 $475
Surgeon Technician Nonmember* $350 $400 $475
Allied Health Other $350 $400 $475
PhD Nonmember* $470 $520 $595
Commercial Press $550 $600 $675

Registration Location and Hours

| MCCORMICK PLACE, WEST BUILDING, 3RD FLOOR |
| Sunday, September 30 7:00 am–6:00 pm |
| Monday, October 1 6:30 am–5:00 pm |
| Tuesday, October 2 7:00 am–4:00 pm |
| Wednesday, October 3 7:00 am–4:00 pm |
| Thursday, October 4 7:00–10:00 am |

Printable registration forms are available at www.facs.org/clincon2012/registration.
In memoriam

William H. Muller, Jr., ACS Past-President, surgical leader, innovator, researcher

by John Hanks, MD, FACS

The surgical world lost a wonderful friend and visionary when William Henry “Harry” Muller, Jr., MD, FACS, died on April 19, in Irvington, VA, at the age of 92. Dr. Muller was an important American College of Surgeons (ACS) leader, having served as Chair of the Board of Regents and as President of the College.

During a career that spanned 40 years, Dr. Muller initiated programs in cardiovascular, plastic, and oncologic surgery at the University of Virginia (UVA) Health System, Charlottesville, where he started the open heart surgery program. He was a pioneer in prosthetic aortic valve surgery and pulmonary banding for pulmonary hypertension. He also earned renown as a pioneer of pediatric congenital heart disease procedures. During the economic downturn of the 1980s, he led the planning, development, and construction of the UVA Health System’s replacement hospital that opened in 1989 and stands as a tribute to his energy and collegiality.

Work-life balance

Dr. Muller was one of the lucky ones who found joy and fulfillment both in his professional life and with his family. He and his wife of 66 years, Hillie, raised three wonderful children, and enjoyed the many rewards of their ever-expanding family.

At the memorial service for him, Dr. Muller’s grandson, Winston Gwathmey, MD, an orthopaedic resident at the UVA Health System, spoke movingly of his grandfather, “Pepa” to him. “My grandfather was a great surgeon who lectured internationally, served numerous visiting professorships, and authored more than 160 scientific papers,” Dr. Gwathmey told the gathering. But the same man, he said, “who trained a generation of thoracic and cardiovascular surgeons taught me how to catch a bream on a piece of bacon when I was five years old.”

“My grandfather would be a little troubled about operating rooms [at UVA] standing idle right now because so many surgeons are at this service,” he added.

One of Dr. Muller’s favorite quotes came from Alan Gregg, an inspiring figure in medical education and research during the first half of the 20th century, who said of excellence: “To this emergent quality I give the name—the heritage of excellence, mostly because it never comes from nor appeals to mediocrities. What more do men of superior character and capacity require for their association than freedom, responsibility, and expectation?” In his presidential address to the Southern Surgical Association in 1975, Dr. Muller referred to this quote, which captures the essence of what he believed and the manner in which he lived.

Early life and education

After graduating from The Citadel in 1940, in Charleston, SC, Dr. Muller attended Duke University School of Medicine, in Durham, NC, where he graduated with honors in 1943. He entered a Johns Hopkins Hospital, Baltimore, MD, internship the following year, under the leadership of Alfred Blalock, MD, FACS. There Dr. Muller made a name for himself in car-
diovascular surgery as he joined a group of young men who would contribute significantly to the direction that American surgery would take in the second half of the 20th century. Dr. Muller excelled in this environment and progressed readily through the training program. He was present in the operating room when Dr. Blalock performed the first Blalock-Taussig shunt procedure in 1946.

In April of 1946, Dr. Muller entered the U.S. Army and was deployed to Germany. On completion of his tour of duty in the army, largely because his father had become gravely ill, he returned to the town where he was born, Dillon, SC, where he maintained a private practice until July 1948. He returned to the Johns Hopkins Hospital as a resident in general surgery and completed his postgraduate training in 1949.

**A brilliant career**

In 1949, his friend and resident colleague, William Longmire, MD, FACS, the first chair of the department of surgery at the new University of California-Los Angeles (UCLA) School of Medicine, recruited Dr. Muller. At UCLA, Dr. Muller quickly assumed a number of vital positions and established cardiothoracic surgery teaching and clinical programs at affiliate institutions. He served as chief of the section of cardiovascular surgery at the Harbor General Hospital, as a thoracic surgeon at the Wadsworth Veterans Administration hospital, and was consultant in surgery at St. John’s Hospital in Santa Monica. In California, Dr. Muller was named by the U.S. Junior Chamber of Commerce as one of the Ten Outstanding Young Men of the States and one of the Five Outstanding Young Men of California.

In 1954, Dr. Muller became the youngest chair of a surgical department ever when the UVA School of Medicine in Charlottesville sought him to serve as the Stephen H. Watts Professor and chairman of the department of surgery and as surgeon-in-chief, UVA Medical Center, a position he would hold for 27 years. Here, he gained the respect of his colleagues and the admiration of his trainees.

The surgeons who trained under Dr. Muller were highly respectful of him, and although he demanded a great deal of them, he also treated them with dignity and compassion.

The medical students loved him. Everybody appreciated his sense of humor. Those who attended one of the medical school graduations enjoyed a delightful performance of the “Hallelujah Chorus,” with graduating students replacing “Harry Muller” for “Hallelujah” in the chorus. Moreover, his former residents formed the Muller Surgical Society in 1968, which continues to meet biannually in Charlottesville.

In 1976, he became vice-president for Health Affairs at UVA, and went on to become the chief executive officer of the UVA Medical Center. It was a role in which he flourished. In 1981, Dr. Muller resigned his position as chairman of the department of surgery, but he continued his active leadership as vice-president until 1990, when he retired.

**Other contributions**

Dr. Muller held leadership positions in many surgical organizations in addition to the ACS. He served as president of the Southern Surgical Association, the American Surgical Association, the Society of University Surgeons, and the Society for Vascular Surgery. He was vice-president of the International Cardiovascular Society and the James IV Association of Surgeons. He was vice-chairman of the American Board of Surgery and served as vice-chairman of the Residency Training Committee in Surgery. He also was a founder of the Association for Academic Surgery.

In addition, Dr. Muller contributed significantly to research programs outside of the institutions where he taught and practiced. He was a member of the National Research Council Executive Committee and chaired the Surgery Study Section and was a member of the Otolaryngology Study Section. He also served on the Academic Surgery Training Committee of the National Institutes of Health, and the Research Committee of the American Heart Association.

On his 90th birthday, his many friends and former residents organized a series of phone calls to him, which lasted most of the day. He joyously answered each one with his customary humor and graciousness. The ACS mourns the loss of a surgical leader, academician, and visionary physician. We extend our sincere condolences to the extended family of Dr. Muller while being in awe of his remarkable accomplishments.

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Dr. Hanks is C. Bruce Morton Professor and chief, division of general surgery, University of Virginia, Charlottesville.
ACS influence spreads via Twitter

The American College of Surgeons (ACS) continues to gain influence on Twitter, the microblogging service, which ranks among the top 10 most visited websites on the Internet. Now six years old, Twitter provides users with the ability to post and read messages, or “tweets,” of up to 140 characters. Since last year’s Clinical Congress, the College has gained more than 2,500 followers, bringing its total number of followers to nearly 5,400. Although influence is not measured by number of followers alone, these data demonstrate increased opportunities to reach more ACS constituents via the microblogging service.

The ACS is using Twitter more frequently, and according to one popular analytics tool, the College is now in the 95th percentile of all scored users of the networks measured. Another tool places the College in the 89th percentile. Both instruments indicate that the College is influential in about 20 subject areas, the top three being surgery, health care, and physicians. One report indicates that tweets from the College are concentrated on surgery and have a focused, highly engaged audience. In addition, nearly a dozen new followers are added each day.

Go to twitter.com/amcollsurgeons to follow the ACS on Twitter. You will notice that we have already begun celebrating our upcoming centennial via the #ACS100 hashtag. In addition, we have begun using #ACSCC12 for tweets about the 2012 Clinical Congress, September 30 to October 4, in Chicago, IL.

Also, be sure to check out the College’s social media sites (see box).

If you have accounts on both Facebook and Twitter, you’ll want to “Like” and “Follow” these sites, as the College posts different content on the sites.

Any feedback ACS members can provide regarding their use of ACS social media tools will help us continue to provide useful, relevant information, so be sure to let us know what’s on your mind. You can contact us via any of the sites above or by sending an e-mail to socialmedia@facs.org.

Use revised code for flight discount for Clinical Congress

The American College of Surgeons (ACS) has arranged special transportation discounts with United Airlines for travel to and from the 2012 Clinical Congress, which will take place in Chicago, IL, September 30 to October 4. You must reference the ACS Z Code—ZMXH and the Authorization Number 479578—to obtain the special fare. Note that the code that appears on page 40 of the 2012 Clinical Congress Program Planner has been changed. (See revised information in the Preliminary Program on page 50 of this issue.) These special discounts are available by booking with United directly (independently or through a travel agent).

To receive the meeting discount, contact United Airlines at 800-521-4041, 7:00 am–9:00 pm (CDT), Monday through Friday; or 8:00 am–6:00 pm (CDT), Saturday and Sunday.

Purchase your ticket online at www.united.com and receive a discount off the lowest applicable fare.

When booking online, enter ZMXH479578 to receive your discount.
The American College of Surgeons (ACS) has long recognized Eleanor K. Grimm as a pivotal figure in capturing and recording the history of the first 50 years of the College. Now three volumes of what the ACS archivists are calling her “retirement scrapbooks” have been scanned and are available for viewing in PDF format as links on the ACS Archives Web page at www.facs.org/archives.

ACS founder Franklin H. Martin, MD, FACS, hired Ms. Grimm in 1913, the year of the College’s establishment. She quickly became his trusted assistant in the College’s development. Her influence was felt throughout Dr. Martin’s years at the College, but possibly even more after his death in 1935 when she served as the Secretary to the Board of Regents and, in effect, chief administrative officer until her retirement in 1951. Friendly with all the founders and other leaders of the ACS during its first 50 years, Grimm’s correspondence with many of them, including the Mayo brothers (William and Charles), George Crile, Albert Ochsner, Allan Kanavel, Ernest Codman, Alfred Blalock, Owen Wangensteen, Frederick Besley, and John Bowman (all MD, FACS), and Malcolm McEachern, MD, CM, Director of the ACS, 1935–1950, is documented here, arranged in her books alphabetically by correspondent.

Among the hundreds of images from Ms. Grimm’s papers that can be found on the site are the following: a black-and-white ink drawing of her by Frederic J. Cotton, MD, FACS, Boston, MA, probably from the 1930s; her 1952 passport photo; and a 1944 War Sessions photo of her with two close associates, Boardman Bosworth, MD, FACS, and Dr. McEachern. Dr. Bosworth had performed a surgical procedure on Ms. Grimm and maintained...
an active correspondence with her. A note on the back of the photo in Ms. Grimm’s writing says, “After the war he did a ‘follow up’ on his wartime patients. Flew on one trip to Iowa & Central States in his own plane. Crashed on landing in N.Y. & died.”

A tiny but representative sample of letters from more than 100 correspondents includes letters from Dr. Crile and Edward Martin, MD, FACS, each showing in his own way how much he appreciated Ms. Grimm and her service to the College. Dr. Crile, one of the 12 original ACS founders, its second President, a member of its Board of Regents for 26 years, and a founder of the Cleveland Clinic in 1921, wrote on June 21, 1939, “I was very much pleased with the two telegrams that you sent, especially with the one sent to Doctor Lambert. I am always impressed by the wisdom and the skillful use of English in these messages that you send from time to time, as indeed, I am impressed by all your work. Very sincerely yours…”

Dr. Edward Martin, another ACS Founder and President of the Clinical Congress in 1912 (which preceded the College’s establishment), ACS Regent, Commissioner of Health in Pennsylvania, and chief surgeon or consulting surgeon at most of the major hospitals in Pennsylvania, wrote to her on January 12, 1923:

Dear Light of my Life:
Your letter makes me more than ever regretful...of that South American trip [referring to the ACS’s 10th anniversary excursion to South America undertaken by leaders of the College]. Did I not brood on the long days on the ocean and taking Spanish lessons from perhaps the one person in the world who could drive that musical language through my thick head; also the dances, and crossing the Equator, and many many other things…. The best of everything to you and tell me more about the trip—who is going that I would know and how many and what wild things are already planned.

This from your slave
Edward Martin

The correspondences yield information about these leaders in surgery in the first half of the twentieth century that was unavailable before, as well as new insights into the history of the ACS and Ms. Grimm’s life and work. The links to the archival descriptions of both her History Notebooks compiled for the College and her Personal Papers can be found on the “Eleanor Grimm Resources” link on the Archives page. The correspondence can be accessed by links to PDFs.
Do you know how to stay out of trouble as an expert witness?

Although the American College of Surgeons (ACS) first published these guidelines for behavior and qualifications almost 12 years ago, Statement 8—“Statement on the physician acting as an expert witness” (http://www.facs.org/fellows_info/statements/st-8.html) remains a vital and relevant working document today. Under the watchful eye of the Central Judiciary Committee (CJC), these guidelines are used three times a year as the CJC reviews cases of questionable testimony provided at the time of the alleged occurrence and should have been actively involved in the clinical practice of the specialty or the subject matter of the case at the time of the alleged occurrence.

Physicians understand that they have an obligation to testify in court as expert witnesses on behalf of the plaintiff or defendant as appropriate. The physician who acts as an expert witness is one of the most important figures in malpractice litigation. In response to the need to define the recommended qualifications for the physician expert witness and the guidelines for his or her behavior, the Patient Safety and Professional Liability Committee of the American College of Surgeons has issued the following statement.

Failure to comply with either the recommended qualifications for the physician who acts as an expert witness, or with the recommended guidelines for behavior of the physician acting as an expert witness may constitute a violation of one or more of the Bylaws of the American College of Surgeons.

**Statement on the physician acting as an expert witness**

*Editor’s note:* This statement was originally published in the June 2000 issue of the Bulletin. This revised statement incorporates revisions recommended by the College’s Central Judiciary Committee and was approved by the Board of Regents at its February 2011 meeting.

**Recommended qualifications for the physician who acts as an expert witness:**

- The physician expert witness must have had a current, valid, and unrestricted state license to practice medicine at the time of the alleged occurrence.
- The physician expert witness should have been a diplomate of a specialty board recognized by the American Board of Medical Specialties at the time of the alleged occurrence and should be qualified by experience or demonstrated competence in the subject of the case.
- The specialty of the physician expert witness should be appropriate to the subject matter in the case. The physician expert witness who provides testimony for a plaintiff or a defendant in a case involving a specific surgical procedure (or procedures) should have held, at the time of the alleged occurrence, privileges to perform those same or similar procedures in a hospital accredited by The Joint Commission or the American Osteopathic Association.
- The physician expert witness should be familiar with the standard of care provided at the time of the alleged occurrence and should have been actively involved in the clinical practice of the specialty or the subject matter of the case at the time of the alleged occurrence.
- The physician expert witness should be able to demonstrate evidence of continuing medical education relevant to the specialty or the subject matter of the case.
- The physician expert witness should be prepared to document the percentage of time that is involved in serving as an expert witness. In addition, the physician expert witness should be willing to disclose the amount of fees or compensation obtained for such activities and the total number of times he or she has testified for the plaintiff or defendant.

**Recommended guidelines for behavior of the physician acting as an expert witness:**

- Physicians have an obligation to testify in court as expert witnesses when appropriate. Physician expert witnesses are expected to be impartial and should not adopt a position as an advocate or partisan in the legal proceedings.
by ACS Fellows in the medical malpractice arena.

Whether providing expert testimony for the plaintiff or defense, the most recent version of Statement 8, reprinted on page 58 and this page, provides members with guidelines to ensure that the highest quality expert opinions are available to the public and to surgeon colleagues. One of the most frequent problems that the CJC encounters revolves around whether the expert witness was in active practice and credentialed to perform the procedure in question at the time of the alleged occurrence.

Familiarity with the ACS guidelines for responsible expert witness testimony is important for any surgeon called upon to provide medicolegal advice or testimony. To test your knowledge about the guidelines in Statement 8, answer true or false to the following statements (correct response and the section of the Statement to which they refer appear at the end of the article):

1. In the courtroom, when asked to express an opinion regarding standards of care, ACS Fellows should base their answer on the earliest portion of the medical records.

2. When providing expert witness testimony, an ACS Fellow should have held, at the time of the alleged occurrence, privileges to perform the same or similar procedures.

3. An expert witness is not required to be familiar with the standard of care and actively involved in the clinical practice of the specialty or subject matter of the case at the time of the alleged occurrence.

4. ACS Fellows who provide false expert witness testimony are protected from exposure to criminal prosecution for perjury, civil suits for negligence, or possible disciplinary action against their professional license.

5. An expert witness must have had a full and unrestricted license to practice medicine at the time of the alleged occurrence.

ANSWERS: (1) False (behavior bullet 2); (2) True (qualifications bullet 3); (3) False (qualifications bullet 4); (4) False (behavior bullet 7); (5) True (qualifications bullet 1).
New postgraduate courses offered at Clinical Congress

Several new Postgraduate Didactic and Skills-Oriented courses will be offered at the American College of Surgeons (ACS) 2012 Clinical Congress September 30 to October 4 at McCormick Place in Chicago, IL. Among them are the following:

**SC01: Advanced Skills Training for the Rural Surgeon: Complex Wound Care and Specialized Diagnostic Techniques** will use simulation and mentored practice to address the rural surgeon’s scope of practice, including concepts of wound management and the principles of using skin flaps for wound closure. An ultrasound module will involve diagnosis and treatment of breast lesions and central line insertion.

**SC07: Telemedicine in Surgery: Building a Virtual Practice** will explore telemedicine in surgery through descriptions of specific applications and building return on investment. Through hands-on demonstrations, participants will learn how applied technology can facilitate a future of virtual patient-centric health care.

**SC11: Advanced Leadership Skills** is designed for mid-career or later surgeons with major administrative responsibilities and will address challenges, such as personal and professional balance, consistency in mission and actions, and sustainable change.

**PG14: Management of Diabetic Lower Extremities** will use a multidisciplinary, evidence-based approach and focus on the comprehensive management of the diabetic lower extremity, including the status of wound management, vascular surgical intervention, plastic surgical approaches, and both orthopaedic and podiatric management of foot deformities.

**PG17: Surgical Critical Care Board Review** is designed for
those surgeons who are preparing for American Board of Surgery Certification or Re-Certification in Surgical Critical Care and will cover surgical critical care, with emphasis on recent advances in resuscitation and ventilation strategies and nosocomial infection strategies.

**PG23: Bundled Care and the Future of Surgical Healthcare:**

*Delivery and Outcomes* will review surgical bundled delivery and outcomes. In an open dialogue, participants will study the concept of reliability science and its application to clinical practice.

**PG24: Trauma Techniques: From Top to Bottom** will instruct on trauma operations ranging from neck exploration through distal extremity vascular exposure and repair and approaches to torso, airway, lung, heart, great vessels, and esophageal injuries. Instructors will review the operative flow of exploratory laparotomy and the treatment of difficult injuries found during exploration.


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### Patient safety sessions to be presented at 2012 Clinical Congress

A total of 23 scientific panel sessions eligible for patient safety-specific continuing medical education (CME) credits will be offered at the 2012 American College of Surgeons (ACS) Clinical Congress September 30 to October 4 in Chicago, IL. Following is a sampling of these sessions:

- 10,000 Hours versus 10,000 Cases: How to Train the Modern-Day Surgeon
- Achieving the Best Outcomes for the Ostomy Patient: Perfect Stoma Creation and Effective Patient Education
- Dangerous Drugs and Surgery: Steroids, Anticoagulants, and Homeopathic Treatments
- Does the Science Support Extending Bariatric Surgery to New Populations?
- Have You Had a Surgical Site Infection Lately?
- Improving the Quality of Surgical Care Around the World
- Joining Forces: How We Can Help Our Returning Veterans
- Quality Programs for Breast Surgeons: What Do I Need to Know?
- Understanding What ACS NSQIP® Can Do for Your Patients and Hospital
- Virtual Reality: The Future of Surgical Training and Rehearsal
- What Are the Limits of Office-Based Procedures?

Other programs featuring patient safety themes include:

- Didactic Postgraduate Course: Challenging Surgical Emergencies: What to Do in the Middle of the Night
- Surgical Forum:
  - Innovative Clinical Technology
  - Patient Safety
  - Quality, Outcomes and Costs (I, II, III)

A full list of patient safety programs will be available at the My CME booth at the Clinical Congress or before the meeting by contacting mycme@facs.org.

More information regarding the 2012 Clinical Congress scientific program will be available online in early June. To contact the staff coordinator of a specific program, go to [http://www.facs.org/education/staff.html](http://www.facs.org/education/staff.html) for complete contact information.

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### Trauma meetings calendar

The following continuing medical education courses in trauma are cosponsored by the American College of Surgeons Committee on Trauma and Regional Committees:

- **Advances in Trauma Conference,** December 7–8, Kansas City, MO.
- **Trauma, Critical Care and Acute Care Surgery,** March 17–20, 2013, Las Vegas, NV

Complete course information can be viewed online (as it becomes available) through the American College of Surgeons website at [http://www.facs.org/trauma/cme/traumtgs.html](http://www.facs.org/trauma/cme/traumtgs.html), or by contacting the Trauma Office at 312-202-5342.
Pre-register for Clinical Congress and receive a reduced price on the webcasts

Maximize your CME opportunities with an individual learning experience online.


Earn additional AMA PRA Category 1 Credits™ upon successful completion of online exams and evaluations. Webcasts have a self-assessment component.

Webcast Pick 12 of 2012
Choose 12 of the 36 webcast sessions of 2012 Clinical Congress
Pre-Congress Price: $195 ACS Member
$250 Nonmember

2012 Complete Best Value Package (Webcasts and selected MP3 audio recordings)
All 36 webcasts of 2012 Clinical Congress
All Named Lectures and selected Panel Sessions are available as MP3 downloads. To see a list of audio sessions, go to: http://web2.facs.org/cc_program_planner/audio_Sessions_2012.cfm
BONUS: Immediate access to 33 webcast sessions from 2011 Clinical Congress
Pre-Congress Price: $395 ACS Member
$460 Nonmember

2012 Webcast Package
All 36 webcasts of 2012 Clinical Congress
Pre-Congress Price: $295 ACS Member
$340 Nonmember

Note: 2012 Webcasts will be available for viewing from December 15, 2012; access expires December 31, 2013.
Reducing the risk of health care-associated infections (HAI) is a priority for surgeons, who have long led the way in introducing clinical approaches, such as antibiotic prophylaxis and antimicrobial stewardship, which have proven to be effective infection prevention tactics. Accessing relevant information about risk-reduction strategies can, however, be a challenging process.

As part of continuing efforts to improve infection control methods, The Joint Commission enterprise has developed the HAI Portal which offers streamlined access to resources from The Joint Commission, along with the Joint Commission Center for Transforming Healthcare, Joint Commission Resources, and Joint Commission International. Topics addressed through the HAI Portal include surgical site infections (SSI), as well as hand hygiene, central line-associated bloodstream infections (CLABSI), multidrug-resistant organisms (MDRO), catheter-associated urinary tract infections (CAUTI), and ventilator-associated pneumonia.

The hospital accreditation section of the Portal features information on the Surgical Care Improvement Project, including antibiotic stewardship and books related to HAIs. In addition to these foundational HAI resources, information is available on influenza, staff education, and vaccinations. Each of these topics represents preventable risks to patients and increased costs to the health care system.

Created in response to an identified customer need to have all HAI-related resources easily available, the resources are organized under three headings:

- HAI topics (SSI, MDRO, CLABSI, and others)
- Infection prevention and control (resources related to environment of care, hand hygiene, and staff education)
- HAI information related to specific accreditation programs (ambulatory care, behavioral health care, critical access hospital, hospital, home care, laboratory services, and long-term care)

For more information on the HAI Portal, visit http://www.jointcommission.org/hai.aspx.

Celebrate the ACS Centennial at Clinical Congress

To celebrate the 100th anniversary of the American College of Surgeons (ACS), the 2012 Clinical Congress, September 30 to October 4 at McCormick Place in Chicago, IL, will feature programs focusing on the history of surgery and the organization.

To explore the past, plan to attend the following panel sessions, which will take place from 4:15 and 5:45 pm on their respective dates:

- Monday, October 1: Founders of Private Clinics and the Early History of the ACS
- Tuesday, October 2: Nobel Prize-Winning Surgeons
- Wednesday, October 3: The Committee on Trauma of the American College of Surgeons: Past, Present, and Future

Join the sessions and observe the progress of surgery and the ACS over the last 100 years. For more information, contact k anthony@facs.org.
When William Halsted, MD, FACS, performed radical mastectomies in the early 20th century, patients presented with locally advanced disease, often involving skin, muscle, and lymph nodes. Dr. Halsted’s palliative operation turned into a cure for some. The legacy of more radical surgery leading to more cures was to last another 75 years. Fast forward to the current era, a time when better screening and awareness have led to diagnosis at much earlier stages and a time when effective adjuvant and neoadjuvant therapies are available to treat the primary breast tumor and involved lymph nodes.

At this point in time, researchers are pondering whether we have more questions than answers—or perhaps we have new clinical practices informed by clinical trials? Specifically, what should physicians do with the axilla when at least 70 percent of patients have no clinically apparent axillary node metastasis? Is axillary node dissection always needed for occult disease? The Alliance for Clinical Trials in Oncology, formerly American College of Surgeons Oncology Group (ACOSOG), has clarified some of these issues.

**ACOSOG trials Z0010 and Z0011**

Almost since the group’s inception, clinical trials performed through ACOSOG have dealt with the critical role of axillary assessment in the breast cancer patient through two landmark trials—Z0010 and Z0011. Sentinel lymph node (SLN) mapping for breast cancer has replaced axillary lymph node dissection (ALND), allowing minimally invasive axillary staging. More thorough evaluation of the SLN has led to detection of micrometastases and isolated tumor cells (ITC) of questionable significance. Micrometastases are associated with the risk of additional non-SLN positivity, but researchers have been unclear as to the risk for locoregional or systemic recurrence or the benefit of completion ALND.

The National Surgical Adjuvant Breast and Bowel Project B-32 study showed occult metastases were associated with a small but statistically significant 1.2 percent decrease in five-year survival.1 The ACOSOG Z0010 trial analyzed the association between survival and metastasis detected by immunohistochemical (IHC) staining of SLNs and bone marrow specimens from patients with clinical early stage T1 to T2 N0 M0 invasive breast cancer. From May 1999 to May 2003, 126 sites enrolled 5,210 patients. ACOSOG encouraged community surgeons to participate, and they accounted for 29 percent of the patients in the trial.2 Of 3,326 SLNs that tested negative by hematoxylin-eosin staining in the ACOSOG Z0010 trial, 349 (10.5 percent) were positive for micrometastasis on IHC, but did not affect overall survival. Of 3,413 bone marrow specimens, 104 (3 percent) were positive for tumor on IHC and associated with decreased overall survival, but only when clinicopathological factors were not considered.3 Other retrospective studies have suggested decreased survival in patients with occult metastasis.4,5

A retrospective review based on cases in the American College of Surgeons’ National Cancer Data Base (1998–2005), however, shows that of 97,314 patients with clinically node-negative breast cancer, completion ALND does not appear to improve outcomes for patients with micrometastases when compared with those patients who undergo SLN biopsy alone.6 Although B-32 showed a 1.2 percent decrease in overall survival, chemotherapy would not seem worthwhile for perhaps a 25 percent benefit for these patients. In ACOSOG Z0010, adjuvant systemic therapy did not have a statistically significant association with the outcomes of patients with sentinel node occult metastasis. Five-year overall survival was 96.3 percent without adjuvant systemic therapy versus 95.7 percent with adjuvant systemic therapy; five-year disease-free survival was 91.4 percent versus 91.0 percent.3 At the end of the day, the clinician needs to
know how to apply this and how to use it in his or her practice.

Indeed, findings from the Z0010 trial are important and should help guide clinical practice. Many laboratories still perform IHC, even though the College of American Pathologists does not recommend it. Highly sensitive testing of SLNs for micrometastases and bone marrow aspiration does not seem warranted in patients with early-stage breast cancer.

ACOSOG Z0011, a sister study to Z0010, randomized patients with clinical T1-2 N0 M0 breast cancer to ALND or SLN biopsy alone for patients with one or two nodes positive for occult metastasis with no extranodal extension. Patients received whole breast radiation therapy and adjuvant systemic therapy. This study showed no significant difference in locoregional control or survival with SLN alone compared with completion ALND.

This study also is markedly changing clinical practice. Z0011 does not support the routine use of ALND in patients with one to two positive nodes undergoing breast-conserving surgery with standard whole breast radiotherapy and adjuvant systemic therapy. In practice, there is little reason to obtain a frozen section on SLNs unless more than two seem suspicious, and many centers prefer to await permanent section results, which can be discussed with the patient postoperatively. Also, there is less reason for breast radiologists to perform ultrasound-guided axillary node biopsy preoperatively because this procedure only demands ALND if imaging suggests multiple node involvement.

Nonetheless, unresolved issues remain, particularly with regard to what to do with the patient with occult SLN metastases who is undergoing a mastectomy, not breast conservation with radiotherapy. A future study might randomize mastectomy patients with one to three nodes positive (N1) disease to observation or ALND and further the observation group to axillary radiation or no radiation.

These clinically relevant ACOSOG trials demonstrate the importance of clinical trials in establishing improved and safer standards of care. Surgeons are encouraged to practice evidence-based medicine, and clinical research provides that evidence. Participation in trials will keep the surgeon at the forefront of new ideas and ensure the outcomes analysis that is so important at this time. Community surgeons are in a perfect position to enroll patients and enhance the image of their practice and institution.

In 2011, ACOSOG, the Cancer and Leukemia Group B, and the North Central Cancer Treatment Group merged into the Alliance for Clinical Trials in Oncology. The purpose is to make these National Cancer Institute-funded cooperative groups more efficient in clinical studies to bring trial results to patients more quickly. Surgeons are strongly encouraged to become members and enroll in trials and educational and skills programs of the Alliance.

References

Keeping up to date is a challenge in today’s marketplace. Let us show you how to use the “must have, need-to-know” information straight, organized and on track. If you are in private practice, employed, or considering a change, let us show you how to wrap your arms around the important issues for 2012.

UPCOMING DATES
NASHVILLE, TN .................... August 16-17
COSTA MESA, CA .................. October 25-26
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According to the Centers for Disease Control and Prevention's publication *Motorcycle Safety*, motorcycle deaths have increased each year between 1997 and 2008, for an overall increase of 150 percent.* Contrary to popular belief, young people are not the only ones who die as a result of motorcycle crashes; more than half the people killed in motorcycle crashes were age 40 or older during that time frame. In 2008, half of all crashes took place on rural roads and almost 40 percent involved alcohol. Forty-one percent of the motorcyclists and 51 percent of the passengers who died were riding without a helmet.

Helmets are designed to maintain the rider’s visibility and hearing, while reducing the risk of death by 37 percent and the risk of head injury by 69 percent. In 2008, helmet use led to nearly $3 billion dollars in health care savings. According to *Motorcycle Safety*, the single most effective way for states to save lives and save money is through a universal helmet use law.

Currently, states fall into one of three general groupings with respect to motorcycle helmet use laws. The first group of states has a universal helmet law that

requires all motorcycle riders and passengers of all ages to wear a helmet whenever riding. The second group has a partial helmet law that only requires specific groups of people, such as children and teens below a certain age, to wear helmets. The third group of states has no helmet use legislation.

The debate rages on from state to state with respect to motorcycle helmet laws. Does a law interfere with an individual’s personal freedom? The simple answer is yes, but no differently than impaired driving laws, cell phone use laws, seatbelt use laws, and quarantine laws for infectious diseases. The purpose of these laws is to provide for the nation’s well-being.

The most recent state to repeal a universal helmet use law was Michigan—although there is still a helmet requirement for children and adolescents in place. The law now states that anyone under the age of 19 is required to wear a helmet. The state where I reside and practice, Illinois, has the distinction of being one of only three states with no helmet use law of any sort. Working year after year and seeing the consequences of unsafe acts that result in lifelong impairment, when in all likelihood a 40-ounce, properly engineered, plastic head covering may have mitigated the severity of brain injury in a motorcycle crash, is disheartening.

To examine the occurrence of motorcyclists’ helmet use in the National Trauma Data Bank (NTDB) research dataset for 2010, admissions medical records were searched using the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM). Searched codes included external cause of injury E codes 810 (motor vehicle crash with train), 811 (motor vehicle crash with re-entrant motor vehicle), 812 (motor vehicle crash with another motor vehicle), 813 (motor vehicle crash with other vehicle); 814 (motor vehicle crash with pedestrian), 815 (motor vehicle crash with collision on highway), 816 (motor vehicle crash due to loss of control), and 819 (motor vehicle crash, unspecified nature). These records were searched by the E code post-decimal value of .2 for driver of a motorcycle (motorcyclist) or .3 for passenger of a motorcycle, and were also searched for a valid protective device field value of either 1 (none) or 7 (helmet). A total of 32,040 records for motorcyclists and motorcycle passengers were uncovered, of which 28,767 records had a protective device field of helmet or no helmet.

In all, 24,653 of these records contained a hospital discharge status, including 18,843 patients discharged to home, 3,233 to acute care/rehab, and 1,748 sent to skilled nursing facilities; 829 died. These patients were 87 percent male, on average 41 years of age, had an average hospital length of stay of 6.8 days, and an intensive care unit length of stay of 6.5 days. They had an average injury severity score of 13.3, were on the ventilator for an average of 7.5 days, and helmet use was 38 percent. A total of 16,736 motorcyclists/motorcycle passengers were tested for alcohol, with 33 percent testing positive. Mortality was more than 81 percent greater in the nonhelmeted group (see Figures 1 and 2, page 67).

The average adult head weighs about eight pounds and is supported by seven vertebrae of which the top two, the atlas and the axis, allow for movement. The bony skull is on average six millimeters thick. The brain, which is the consistency of gelatin and is contained within a bony structure and supported on a bony spine, similar to an inverted taffy apple, was not engineered to absorb the type of impact that comes from hitting the concrete at 30 miles per hour. As physicians, we must tell our patients, “Please use your head and wear a helmet—if not for yourself then for the people who care about you, so they can continue to care about you instead of having to care for you when you sustain a significant brain injury.”

Throughout the year, we will be highlighting data through brief reports in the Bulletin. The NTDB Annual Report 2011 is available on the ACS website as a PDF file and as a PowerPoint presentation at www.ntdb.org. In addition, information regarding how to obtain NTDB data for more detailed study is available on the website. If you are interested in submitting your trauma center’s data, contact Melanie L. Neal, Manager, NTDB, at mNeal@facs.org.

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