Big promise and big challenges for BIG HEALTH CARE DATA
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Patient safety and quality care are the responsibility of every member of the operating room (OR) team, including the anesthesiologist, the nursing staff, the technicians, and, of course, the surgeon and any resident or other physician who is assisting. In an era of multidisciplinary, team-based care, all of these health care professionals work together, check each other’s actions, verify that the established protocols are being followed, and point out any possible hazards. Likewise, all specialties work together during the preoperative, perioperative, postoperative, and post-discharge stages of care to ensure that patients receive optimal care in and out of the hospital setting and to avert the possibility of complications.

More and more evidence is showing that what these health care professionals do and how they engage their patients in their own care in the perioperative phase has a significant effect on outcomes. Consequently, a great deal of attention is now being focused on the perioperative phase of care, along with what occurs intraoperatively and during recovery.

The perioperative phase of care begins with the decision for surgery and intensifies 24–48 hours before an operation. It essentially is the time when the operating team and the patient work together to ensure the patient’s safety. Perioperative care is provided in the ambulatory setting, the primary care physician’s office, the consultants’ offices, the home environment, and the hospital admitting and patient holding areas. This phase of care involves identifying risk, comorbidities, and possible drug interactions; evaluating nutritional status; counseling for smoking cessation; and ensuring that the patient will have access to appropriate postoperative care. The patient may make changes in diet and adjustments to medications for chronic conditions. Immediately before an operation, an updated patient history and physical assessment should occur and the operating team should confirm that the correct procedure is being performed on the correct site and correct patient. Surgical care bundles are established and checklists are designed to eliminate error, optimize outcomes, and reduce clinical practice variation. It is a critical phase of surgical care and should be approached with the same degree of care and attention to detail as one demonstrates at all other phases of the delivery of surgical care.

Call to action

The American College of Surgeons (ACS) has a long-standing expectation that its members will safeguard their patients’ care throughout the course of surgical treatment. The ACS Statements on Principles state, “The surgeon is responsible for the patient’s safety throughout the preoperative, operative, and postoperative period, including the responsibility for eliminating wrong-site, wrong-procedure, and wrong-patient surgery.”*

The College and other stakeholders are now developing recommendations on how best to ensure that patients receive safe, high-quality surgical care. Some of you may be familiar with the perioperative surgical home (PSH), which the American Society of Anesthesiologists (ASA) has proposed. The ASA has brought forth the PSH as a model of delivering health care throughout the patient’s entire surgical care experience—from decision making through recovery.

Under the PSH paradigm, the patient’s care would be coordinated by a director of perioperative services. The ASA suggests that a physician is best suited to this role. Application of this concept must be compatible with the surgeon’s sense of responsibility for overseeing all aspects of surgical patient care, although surgeons welcome collaborative efforts to ready patients for an operation with the anesthesiologist acting as partner. The leaders of the ACS and the ASA have been discussing perioperative care, and the ACS will continue to work with the ASA to ensure that all of the surgical patient’s needs are properly met.

ACS activities

Presently, the College is involved in a number of efforts to establish protocols for surgeons to lead the OR team and patient through the perioperative care
Presently, the College is involved in a number of efforts to establish protocols for surgeons to lead the OR team and patient through the perioperative care phase.

...senting 200-plus surgeons. More than 4,000 patients have been screened using the checklists and other instruments that the Strong for Surgery program has developed.† Among other tools, Strong for Surgery has developed guidelines to screen for malnutrition, lists of lab tests for risk stratification, and processes for screening for supplements. Presently, Strong for Surgery is creating best practices for perioperative glucose control, generating checklists to screen for medication use, evaluating best practices for opioid minimization, and developing recommendations for preoperative smoking cessation. The College is working to bring these important programs forward.

**Surgeons must lead**

The delivery of perioperative care is more complex today than ever, and the evidence is mounting to show that all members of the health care profession need to be as attentive to this stage of surgical care as any other. Although surgical care has evolved from a system in which the surgeon oversees every aspect of operative readiness and care to a system in which multidisciplinary teams are working together to provide optimal care, it is still the surgeon who must be accountable for the care his or her patient receives. It is part of our contract with society as trusted health care professionals. We must never allow perioperative care to be considered someone else’s responsibility. ♦

Big promise and big challenges for BIG HEALTH CARE DATA

by Matthew Coffron, MA, and Frank Opelka, MD, FACS
BIG HEALTH CARE DATA

The American College of Surgeons (ACS) has long valued the benefits of collecting and analyzing clinical outcomes data as a means of improving surgical care. In the early 20th century, for example, Ernest A. Codman, MD, FACS, proposed The End Result Idea—his premise that a hospital staff should follow every patient treated long enough to determine whether the treatment was successful.1,2 Physicians would then use any failures as learning opportunities to improve care and avoid similar situations or outcomes in the future. This pattern of collecting data and using it to drive improvements in the quality of surgical care has been repeated and refined for more than a century.

Dr. Codman and his peers could scarcely have imagined the explosion of data pertinent to quality improvement efforts available today or the insights derived from clinical data—information that will, hopefully, become widespread in the near future. Integration of data from clinical registries, electronic health records (EHRs), and other primary sources holds great potential as a means of improving the quality and efficiency of health care and lowering costs. This article explores the growing demand for health care data and introduces readers to the concept of “big data” and its implications for surgical practice.

Growth in HIT

In the 21st century, significant efforts have been made to incorporate modern computer technology, mobile devices, software, and other technological advances into the production and analysis of medical data. Examples of growth in health information technology (HIT) include both the move from paper to EHRs, as well as the growth in clinical data registries. More than 120 clinical data registries were in operation or in development by specialty organizations in the U.S. as of November 2014, according to a clinical registry inventory produced by the National Quality Registry Network (NQRN), a voluntary network of registry sponsors and other interested parties.1

Many surgeons and other physicians had anticipated that EHRs would better leverage clinical information within their daily workflow and support direct data feeds to clinical registries and, in turn, better guide clinical care. However, early products have largely failed to collect, analyze, and return useful information at the point of care. The College has tried to improve surgeons’ experience with EHRs by providing tools to help them choose the right EHR prod-
uct, offering guidance to enable a better understanding of the EHR incentive program and empowering users to meet meaningful use requirements. But to fully attain the goal of leveraging clinical data at the point of care, surgeons must push for optimal use of the digital information in EHRs and registries by appropriating more information into the surgical team’s workflow.

Federal efforts to expand HIT

Early federal efforts at using data to reduce costs and drive improvements in outcomes focused largely on administrative claims data, as these were the data readily available to the government through the Centers for Medicare & Medicaid Services (CMS). Administrative claims data are routinely collected for payment purposes and are relatively easy to analyze. However, claims data do not capture the nuances of comorbidities, severity, conditions present on admission, complications, patient experience, or other socioeconomic factors critical to understanding health outcomes. Unlike administrative data, which aggregate experience for system management requirements, clinical data are patient-specific and can be more precisely stratified to define best practices. In fact, administrative claims-based performance measures quickly proved inadequate to fully achieve the dual goals of improving health care outcomes and slowing growth in health care spending. In 2009, Congress passed the Health Information Technology for Economic and Clinical Health (HITECH) Act as part of the American Recovery and Reinvestment Act (commonly referred to as the stimulus package). The HITECH Act contained incentives for providers to adopt EHRs and laid out meaningful use requirements with the goal of ensuring that the federal funds were being spent wisely and in a way that would improve the provision of health care. Although the meaningful use requirements are far from perfect, the EHR incentive program has helped to expand the use of EHRs, increasing the amount of clinical data potentially available for analysis.

Many obstacles must be overcome on the path to meaningful use of digital information in health care records before patients and surgeons will feel the beneficial effects of digital clinical information. At first, federal lawmakers seemed to anticipate that simply digitizing the paper record would provide a return that would satisfy surgeons and other health care providers. However, many surgeons saw the rollout of EHRs largely as an additional administrative burden. Due to a limited information exchange, a lack of data standards and interoperability, and virtually no real-time clinical analytics, time spent entering data into EHRs may seem like a poor use of resources. For many clinicians, the EHR is simply an expensive means of recording data previously stored in a paper record, and extracting information from these digital files has proved to be an inefficient tool for meeting the needs of patients or surgeons.

Federal programs have since taken incremental steps to encourage the use of clinical data registries. This effort has been aimed at increasing the clinical value of data collected and reducing administrative burdens, but it has also put further pressure on EHR users to feed information back into registries. One such federal action was attached to the so-called “fiscal cliff bill” that prevented a government shutdown in January 2013 and delayed sustainable growth rate-related cuts in Medicare physician payments. This provision provides an opportunity for Medicare eligible professionals (EP) to simultaneously use existing high-quality clinical registries for quality improvement and for meeting Physician Quality Reporting System (PQRS) requirements. Beginning in 2014, EPs were also able to report to PQRS with the qualified clinical data registry (QCDR) reporting option. QCDRs offer more flexibility than other PQRS reporting options, allowing EPs to report on a variety of measure types. In addition, QCDRs must have the capacity to track outcomes, provide timely feedback reports, and risk-adjust when appropriate. All of these capabilities are intended to result in the reporting of measures that are more relevant, clinically appropriate, and actionable for surgeons than the measures currently available as reporting options through PQRS. In April of 2014, CMS approved the Metabolic and Bariatric Surgery Accreditation and
Quality Improvement Program (MBSAQIP) data registry, as a QCDR. This combined ACS-American Society for Metabolic and Bariatric Surgery registry was one of approximately 30 to receive such a designation. By becoming a QCDR, the MBSAQIP is able to develop its own quality measures—in effect, this will enable metabolic and bariatric surgeons to choose what is reported to CMS. The ACS maintains that the measures within the MBSAQIP QCDR are more relevant, clinically appropriate, and actionable when compared with traditional PQRS measures.

The steps that the federal government has taken have been well-intentioned and, in some instances, have provided opportunities to leverage high-quality clinical data for use in federal incentive programs, such as the QCDR. However, many programs such as meaningful use have been poorly coordinated and missed the big picture, moving the ball only a modest distance toward the goal of using robust clinical data to achieve higher quality health care and slowing growth in health care spending, while arguably adding to the administrative burden that surgeons typically face. However, when factored together, the multitude of primary sources of data paired with powerful modern data analysis techniques and hardware are greater than the sum of their parts and show great potential for improving care for patients while reducing the administrative burden on surgeons.

This is where big data comes in. There are many differing definitions of big data, but in its simplest terms, it involves the analysis of large amounts of complex data from both structured and unstructured sources to derive valuable insights. For health care, this could mean combining information from registries, EHRs, claims databases, and other sources to improve the provision of care to the public, and some organizations are doing just that today.

**HIT in a big data environment**

Private sector firms are working together to create standards and build systems that can harness the massive amounts of data collected on a daily basis and use it to promote real-time measures for leading and lagging indicators that improve care and patient safety.

For example, the Louisiana State University Health Care Services Division, Baton Rouge; Intermountain Healthcare, Salt Lake City, UT; and the Beth Israel Deaconess Medical Center, Boston, MA, have currently set up systems that are capable of pulling data from multiple EHR vendors, registries, payors, and other sources and using it to provide physicians with real-time tools to improve the quality of care provided and improve population health, allowing for a focus on preventative care. These tools can include leading indicator alerts that, for example, point out that a colonoscopy may be recommended for a given patient, or automatically notice when emergency department visits for flu spike and remind primary care providers to recommend flu vaccines to patients who are being seen for other reasons. Lagging indicators, such as outcomes or compliance with best practices, also benefit as additional information can be garnered from the wide variety of sources and fed back into registries to provide a more comprehensive view of performance.

These pioneering health care systems have had to overcome a number of barriers to be able to put their data to work. The data available are currently siloed and housed in a number of public and private systems. Additionally, data use agreements have had to be worked out with each system. Another challenge is that there is no single standard for health data and metadata to allow for easy analysis across multiple sources, so data must be processed and formatted into a standardized structure; this process is sometimes referred to as cleaning or scrubbing. And, of course, all patient data must be protected to ensure privacy and comply with federal laws and regulation. All of these actions are accomplished through the use of advances in technology that exploit service oriented architecture (SOA) and platform as a service (PaaS). SOA and PaaS can create a stack of informatics which sits across many primary data sources (including EHRs from multiple vendors) and supply
the analytics needed to provide researchers, health care providers, and even patients with valuable, real-time information.

SOA and PaaS can be thought of as similar to the apps running on mobile devices, specifically smartphones. Data are output to the end user through application programing interfaces (APIs), commonly referred to as apps. The smartphones do not store the data. The apps on the phone use common data definitions, such as global positioning system (GPS), to create a host of applications from mapping your location to directions to the local grocery store or gas station. In this way, data are entered once and repurposed many times. In health care, the GPS function could be replaced by a set of apps that track hemoglobin A1c or surgical site infections, for example. Since this is all accomplished in the cloud through virtual analysis, the data can remain housed at its source, obviating the need for data aggregation. The figure on this page gives an overview of how such a system might be structured.

**Barriers to expanding the use of big data in health care**

Creation of a national library of data standards and a library of defined cohorts for conditions (such as definitions for diabetes, congestive heart failure, or asthma) would be a leap forward in enabling advanced health analytics. The NQRN is attempting to create data standards for registries to define aspects of care such as a deep vein thrombosis, surgical site infection, an acute myocardial infarction, or diabetes. In addition, several large health care systems have come together to form the Healthcare Services Platform Consortium (HSPC) with the goal of setting standards for platforms (a sort of “cloud,” such as an Android-like platform) that stack atop and reach across EHRs, using NQRN data standards, to pull data and repurpose them for use in Maintenance of Certification (MOC) programs, registries, and so on. Creation of a set of common standards, analogous to the one used by the banking industry to communicate seamlessly across
a multitude of independent entities, would go a long way toward facilitating adoption of these new tools. Ultimately, given the right environment, a separate marketplace for clinical apps on health care platforms will develop in which applications can be made available to multiple end users.

Access to all pertinent sources of clinical data is essential to appropriating the full benefit from big health care data, and for this to happen, the primary data held in EHRs will need to be fully leveraged. Unfortunately, health systems that have created and implemented this type of big data platform are already seeing private EHR vendor attempts to govern and control the information flow by blocking access to clinical information for analytics so that they can control and monetize the use of data housed in their products. Such attempts by various private companies to block information could prevent physicians from continuing to use these powerful tools for improving patient care and quality, or, at the very least, greatly limit their value. If left unchecked, this trend will have a chilling effect on innovation and will slow progress toward interoperability.

The advantages of the interoperability provided by PaaS and the improvements to health care it promises merit further investment in this technology as well as regulatory support from the federal government. In an August 14, 2014, letter to Sen. Ron Wyden (D-OR) and Sen. Charles Grassley (R-IA), ACS Executive Director David B. Hoyt, MD, FACS, expressed the need for information held in EHRs, registries, and other primary sources to remain available or be made available in a secure, cloaked or de-identified, standard format for the purpose of data analysis. This letter was sent in response to a request for information on how to advance the availability and utility of health care data from then Senate Finance Committee Chairman Wyden and Finance Committee member Grassley.

In fact, the issue of information blocking is receiving growing attention in Washington. In July 2014, two physician members of the House Energy and Commerce Committee, Rep. Phil Gingrey (R-GA) and Rep. Bill Cassidy (R-LA) spoke out on the issue, going so far as to call out individual EHR vendors for the practice and suggesting that the lack of interoperability between EHRs that have been supported with billions of taxpayer dollars is equivalent to fraud. The Energy and Commerce Committee has undertaken an ambitious multi-year effort to ensure that federal laws and regulations keep pace with advances in medicine in many areas, including “unleashing the power of digital medicine.” The ACS has tried to support these efforts by providing information on multiple occasions.

More recently, the fiscal year 2015 spending bill enacted by Congress in December included report language urging the Office of the National Coordinator for Health Information Technology (ONC) to certify only EHRs that do not block health information exchange. The report language further called on the ONC to provide a detailed report to Congress on the problem of information blocking, including a comprehensive strategy on how to address the issue. Although such report language is nonbinding, it is seen as a strong statement on the intent of Congress. Federal agencies, which receive their funding from Congress, frequently use these reports as guideposts for developing rules and regulations. If that proves to be the case and ONC follows Congress’ instructions, the report and strategy recommendations could be released in the spring.

How surgeons can support big data ecosystems
ACS Fellows and members can take a number of College-supported steps to realize the full potential of a data ecosystem. Actions surgeons may take to support the data ecosystem include the following:

- Surgeons must first understand and engage in the design of data ecosystems larger than the EHR “space.” This understanding ideally means surgeons will have a role in optimizing data and its multiple repurposing—both on the input and the output side of the ecosystem.
The data ecosystems require a library of data definitions and cohorts defined by leaders in specialty medicine and surgery so that all platforms and EHRs will have the necessary metadata needed for use in analytic tools.

Apps or data outflows for numerous purposes need to be defined such as to identify a specific moment in clinical care during a patient visit or for more broadly tracking a surgical population outcome, such as in cancer care or results from total joint replacements. Surgeons need to be involved in designing clinical alerts, outputs for MOC, EHR to registry feeds, and more. The data ecosystem must also fit the payor system for assuring outcomes, driving improvement, optimizing costs, and creating public transparency.

The governance of the data ecosystem must ensure that EHR vendors do not limit the availability of data needed by patients and clinicians to optimize care. Silos of information with data standards defined by EHRs would not create the broad data ecosystems needed for digital data to reach its full potential.

Big data in health care—if allowed to flourish in an environment conducive to the secure analysis and use of that data—holds great promise for improving outcomes and informing decisions at the point of care. Surgeons have the experience and expertise to create this environment and to use it to improve efficiency and outcomes. This could represent the next evolution of the College’s century-long cycle of continuous quality improvement, putting into the hands of individual surgeons the capability to meaningfully analyze amounts of data that would have been inconceivable to Dr. Codman and his peers. It is up to the College and today’s Fellows to continue to lead and innovate in this realm.

REFERENCES

State legislatures get back to work

by Tara Leystra Ackerman, MPH, and Justin Rosen

HIGHLIGHTS

• Identifies state legislative priorities for the ACS, including implementation of provisions in the ACA, coverage for bariatric surgery, medical liability reform, scope of practice, trauma, and so on.

• Provides an update on how state legislatures are addressing the issues of concern to surgery.

• Describes how the ACS is advocating on surgery’s behalf at the state level and how Fellows can get involved in these efforts.
The State Affairs team at the American College of Surgeons (ACS) diligently reviews hundreds of bills that are introduced every week in the state legislatures, marking many for closer monitoring and potential grassroots advocacy. From state health exchanges implemented through the Affordable Care Act (ACA), to the Uniform Emergency Volunteer Health Practitioners Act (UEVHPA), to determining a legislative definition of surgery—2015 looks like it will be a productive year for state legislatures. This article reviews state legislative issues that are priorities for the ACS in 2015.

ACS identifies key issues

Identifying and defining those issues that are being debated at the state level that will affect surgery and patient care is a complex task. The annual input of the College’s Health Policy and Advocacy Group (HPAG) has helped narrow the most pressing issues of particular interest to surgeons in 2015, providing guidance to State Affairs staff about how to address these matters as they arise. Priorities for 2015 that the HPAG has identified are as follows:

• ACA implementation. States are largely responsible for implementing many of the provisions in the ACA, and as the process continues, the College is closely monitoring related issues that are emerging. Specific concerns include the narrowing of insurance networks and the tiering of health care providers based on the cost and quality of care they deliver and how these practices may affect access to care. Some states that haven’t expanded Medicaid are exploring their options, and these activities are also being closely monitored.

• Bariatric surgery coverage. Bariatric surgery is not classified as an essential health benefit (EHB) in 25 states, even though the procedure is a proven method for treating obesity. The College has been collaborating with the American Society for Metabolic and Bariatric Surgery (ASMBS) to include coverage for bariatric surgery as an EHB in states with their own insurance exchanges.

• Medical liability reform. Medical liability reform is a perennial issue for surgery. The ACS will actively engage in efforts to improve the medical liability climate at the state level, and will continue to oppose any efforts to remove reforms in states where they have been adopted.

• Scope of practice. Scope of practice was a hot topic in 2014 and continues to be an important issue in 2015. Of particular concern is legislation that expands the scope of practice for optometrists, allowing them to perform certain surgical procedures. The College will continue to work with its specialty society partners to oppose these efforts and to support the rest of the medical community as states try to expand the scope of practice for many other nonsurgeons, including podiatrists, audiologists, physical therapists, and advanced practice registered nurses (APRNs).

• Trauma. The College will continue to advocate for stronger injury prevention legislation at the state level, including protecting existing helmet laws, strengthening distracted driving laws, and ensuring safe driving conditions.

• UEVHPA. The College is renewing efforts to expand the number of states that have adopted the UEVHPA.

State legislative activities

A significant amount of activity around key issues has already been observed this year.

Implementation of the ACA

Health care networks in some states, in order to provide seemingly affordable insurance products to subscribers, have offered insurance plans with limited access to health care providers and no out-of-network coverage. This practice led policymakers in California to issue emergency regulations on January 30 aimed at addressing these concerns.1 The emergency regulations mandate that health care networks take the following actions:

STATE LEGISLATIVE ACTIVITY
The annual input of the College’s HPAG has helped narrow the most pressing issues of particular interest to surgeons in 2015, providing guidance to State Affairs staff about how to address these matters as they arise.

- Include an adequate number of primary care physicians who are accepting new patients to accommodate recent and ongoing enrollment growth
- Include an adequate number of primary care providers and specialists with admitting and practice privileges at network hospitals
- Consider the frequency and type of treatment needed to provide mental health and substance abuse disorder care when creating the provider network
- Adhere to and monitor new appointment wait time standards
- Report information about the networks and changes to the networks to the Department of Insurance on an ongoing basis
- Provide accurate provider network directories to the Department of Insurance and make them available both to policyholders and the public, so that Californians shopping for health care insurance can access this information as well
- Make arrangements to provide out-of-network care at in-network prices when there are insufficient in-network care providers
- Require network facilities to inform patients before care is provided that an out-of-network medical provider will participate in the non-emergency procedure or care, so that the patient can decline the participation of the out-of-network provider if they so choose

Another emerging problem stemming from the narrowing of insurance networks in state-run insurance exchanges is the increased use of out-of-network providers. Legislation is expected to be introduced to address out-of-network coverage in Colorado. This bill would limit the amount of money out-of-network physicians can charge patients.

**State expansion of Medicaid**

The ACA calls for the states to expand Medicaid eligibility for low-income patients. Indiana’s proposal to expand Medicaid was approved by the U.S. Department of Health and Human Services in January. The Indiana plan will require everyone participating to pay a monthly premium of 2 percent of their income. Those individuals and households with income under the poverty level will not have to pay premiums, but then will not have access to vision or dental benefits. Participants will also have to pay co-payments. Many other states—including Idaho, Montana, Tennessee, Utah, and Wyoming—are looking at similar creative ways to expand Medicaid.

**Bariatric surgery coverage**

Another priority for the State Affairs team is addressing coverage issues in the 25 states that do not classify bariatric surgery as an EHB. When obesity is treated with bariatric surgery, significant reductions occur in related co-morbidities, such as hypertension, type 2 diabetes, sleep apnea, and high cholesterol. Efforts are moving forward with meetings to address EHB coverage for bariatric surgery in Arkansas, Colorado, Connecticut, the District of Columbia, Idaho, Minnesota, Oregon, Utah, and Washington. Letters have been sent to the governors, insurance commissioners, legislative leaders, and health care exchange directors asking them to support expanding their benchmark plan or instituting authorizing legislation.

Even among those that do require coverage for bariatric surgery, some states, such as Michigan, New York, and New Mexico, have discriminatory coverage policies. These policies include higher co-payments, higher deductibles, and limits on the number of procedures covered per patient. In addition to collaborating with ASMBS, the ACS intends to work with the Centers for Medicare & Medicaid Services (CMS) and policymakers in the states to address these policies.

**Medical liability reform**

During the first few months of 2015, significant movement on medical liability reform has already occurred in a number of states. A case currently is being heard...
in the Supreme Court in California challenging its $250,000 cap on noneconomic damages. Furthermore, after the defeat of last year’s Proposition 46, which would have more than quadrupled the cap, the California state legislature may be asked to take up legislation to increase the limit on noneconomic damage awards.

Legislation to increase caps on damages is being introduced in other states that have adopted liability reform measures, as well. In New Jersey, legislation has been introduced to cap noneconomic damages at $250,000. In Indiana, legislation was introduced in the state senate that would allow liability claims of up to $45,000 against a physician to bypass the medical review panel and reach the Patient’s Compensation Fund. Currently, claims of $15,000 or less may bypass the review panel. In the Indiana House, a bill was introduced to raise caps on medical liability from $1,250,000 to $1,650,000. The bill also would have increased the maximum amount of liability for health care professionals or their insurers from $250,000 to $300,000. In Indiana, any award above that amount is paid out of the Patient’s Compensation Fund.

Legislation has again been introduced in Missouri to reinstate the caps on noneconomic damages. One bill would establish a statutory cause of action to replace the common-law action for medical liability cases, thereby removing the ability of the courts to rule these caps unconstitutional. Another piece of legislation would amend the state constitution to limit the liability for noneconomic damages in medical liability cases, as well as authorize the General Assembly to adjust the amount by law as necessary. If this bill passes, the issue would then go on the ballot.

States continue to explore other reforms, including “I’m Sorry” legislation, which protects health care professionals from having statements of apology to patients and families used as evidence of wrongdoing in liability lawsuits.

**Scope of practice**

At press time, the College was monitoring more than 60 bills that would increase the scope of practice for nonsurgeon health care practitioners, such as podiatrists, APRNs, nurse anesthetists, and chiropractors. Arkansas is considering a bill to eliminate physician supervision requirements in the administration of anesthesia. Kansas is considering a bill to allow podiatrists to perform surgery on the foot, ankle, and tendons that insert into the foot, including amputation of the toes or part of the foot; however, they would be prohibited from amputating the whole foot or administering any anesthetic other than local. Another Kansas bill would allow APRNs to practice independently. Florida also has a bill to allow APRNs to practice independently.

Another emerging issue in 2015 is the licensing of naturopaths. A number of states, including Mississippi, Montana, and Washington, are considering bills that would license naturopaths, require insurance companies to cover their services, or allow them to prescribe certain medications. For example, in North Dakota, a bill was introduced that would allow naturopaths to perform minor procedures, including the repair and care incidental to superficial lacerations, abrasions, and lesions; the removal of foreign bodies located in the superficial tissues, cysts, ingrown toenails, skin tags; the treatment and removal of warts; and the incision and drainage of boils.

A statutory definition of surgery at the state level can help to ensure a patient receives quality physician-led care. In 2003 the ACS collaborated with a number of surgical specialty societies to expand an existing ACS position statement on laser surgery to include a definition of surgery. In the Statement on Surgery Using Lasers, Pulsed Light, Radiofrequency Devices, or Other Techniques, the College defines surgery as follows:

Surgery is performed for the purpose of structurally altering the human body by incision or destruction of tissues and is part of the practice of medicine. Surgery also is the diagnostic or therapeutic treatment of conditions or disease processes by any instruments causing localized alteration or transportation of live human tissue, which include lasers, ultrasound, ionizing, radiation, scalps, probes, and needles. The tissue can be cut, burned, vaporized, frozen, sutured, probed, or manipulated by closed reduction for major dislocations and fractures, or otherwise altered by any mechanical, ther-
Injection of diagnostic or therapeutic substances into body cavities, internal organs, joints, sensory organs, and the central nervous system is also considered to be surgery (this does not include administration by nursing personnel of some injections, such as subcutaneous, intramuscular, and intravenous when ordered by a physician). All of these surgical procedures are invasive, including those that are performed with lasers, and the risks of any surgical intervention are not eliminated by using a light knife or laser in place of a metal knife or scalpel. Patient safety and quality of care are paramount, and the College therefore believes that patients should be assured that individuals who perform these types of surgery are licensed physicians (defined as doctors of medicine or osteopathy) who meet appropriate professional standards.

The Connecticut Chapter of the ACS is currently advocating for state legislation comprising a definition of surgery. ACS chapters interested in pursuing similar legislation or in obtaining more information on definition of surgery legislation should contact state_affairs@facs.org.

Trauma
Most of the trauma-related activity in the state legislatures in 2015 has revolved around injury prevention, especially efforts to curtail distracted driving. At least a dozen states, including Arizona, Connecticut, Florida, and Georgia, are currently considering bills to modify their distracted driving laws. Some bills would move the violation from a secondary to a primary offense; some would change the fines for the violation; others would adjust current language to account for changes in technology. A number of youth concussion prevention bills also are being considered. A bill to require all motorcycle operators and passengers to wear helmets was introduced in New Mexico. On the other side of the issue, West Virginia, Washington, and Nebraska are considering bills to remove helmet requirements for motorcycle riders, which would run contrary to the College’s official statement in support of enacting and sustaining universal helmets laws.

It has been considerably quieter in terms of trauma system development and funding this year. A bill introduced in the Texas legislature would repeal the state’s Driver Responsibility Program, which is a source of funding for the state trauma system. The Driver Responsibility Program, enacted in 2003, imposes surcharges on people who commit certain traffic violations, including driving while intoxicated and driving without a license. Money collected from the program has allowed for the expansion of trauma care in Texas, leading to better access to timely care throughout the state. The ACS is working with stakeholders to oppose this repeal.

UEVHPA
The UEVHPA was developed in response to emergency care crises that arose in the aftermath of Hurricanes Katrina and Rita in 2005. This model legislation allows a state to recognize the licensure of physicians and health care practitioners in other states if those providers have registered with a public or private registration system to provide care during a declared emergency.

Currently, 14 states including Arkansas, Colorado, Illinois, Indiana, Kentucky, Louisiana, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, Tennessee, Texas, Utah, as well as the District of Columbia, have enacted the UEVHPA, and the College is making a concerted effort to get this legislation enacted in other states. In 2015, the focus has been mainly on states in the southeast, including Alabama, Florida, Georgia, Mississippi, and South Carolina. ACS State Affairs staff will also be working to advance the legislation in Pennsylvania. The College expects this to be a multi-year effort. State Affairs has been working with the ACS chapters, state medical societies, and the Uniform Law Commission to advance this bill. Advocates were identified in each state to help promote the bill in the state legislatures, and special recognition goes to Hugh A. Gamble II, MD, FACS, in Mississippi for his work to get the bill introduced in that state. Fellows and members of ACS state chapters are encouraged to advocate for passage of the act in their states. If you are interested in getting involved in this effort, contact Tara Leystra Ackerman at tleystra@facs.org or 202-672-1522.
Other issues
There are several other relevant issues at the state level, including graduate medical education (GME) and the health effects of electronic cigarettes. The College is participating in efforts to address these concerns, as well.

For example, over the last several years, Texas has been working to increase funding for GME to keep pace with the addition of three new medical schools and the anticipated 250 new medical students in 2016 from these schools. Organized medicine is advocating for an additional $30 million for the 2016–2017 fiscal year. Despite the 45 percent increase of $30 million in 2014–2015, Texas is still far below the peak of $106 million in funding allocated in 2010–2011.1

Efforts to address GME funding are also under way in California and Indiana. As the potential cuts in federal funding for GME loom large, more and more states will be forced to consider increased state funding.

Many states also are looking at the unregulated issues of liquid nicotine and vaping, which is associated with e-cigarettes. Currently, legislation to regulate and/or tax e-cigarettes, vaping, and liquid nicotine is pending in Arkansas, California, Hawaii, Indiana, Kentucky, Michigan, Missouri, Mississippi, North Dakota, New Hampshire, New Jersey, New Mexico, Nevada, New York, Puerto Rico, Texas, Virginia, and Washington.

Get involved
Fellows continue to play an important role in advocating for the practice of surgery in state legislatures. Grassroots advocacy for enactment of the UEVHPA in additional states or coverage for bariatric surgery are two examples mentioned in this article, but many more opportunities exist. Fellows can respond to Action Alerts from the College, attend state chapter lobby days, and join the State Councilor program. State Councilors fill a key role for SurgeonsVoice, as they are the boots-on-the-ground grassroots advocacy network for the entire program. More information on this activity and others is available on the SurgeonsVoice website, www.surgeonsvoice.org.

Another way to get involved is to attend the ACS 2015 Leadership & Advocacy Summit, April 18–21, at the JW Marriott in Washington, DC. The annual summit is a dual meeting that offers volunteer leaders and advocates comprehensive and specialized educational sessions focused on effective surgeon leadership, as well as interactive advocacy training useful in federal and state grassroots advocacy, and coordinated visits to congressional offices.

If you have any questions about these state issues or programs or are interested in becoming more involved in the College’s grassroots advocacy efforts, contact state_affairs@facs.org or call 202-337-2701.

REFERENCES
The Lancet Commission on Global Surgery makes progress in first year of work:

An update

by Sarah L. M. Greenberg, MD, MPH;
Martha P. Vega, MD;
Alexis N. Bowder;
and John G. Meara, MD, DMD, MBA, FACS
The global burden of conditions requiring surgical care, such as injuries, congenital anomalies, cancer, and complications from childbirth, is large and continues to grow. Recent estimates indicate that a limited number of surgical conditions represent 18 percent of the global burden of disease.1 Nonetheless, marked disparities in access to surgical and anesthesia care persist worldwide. Billions of people have no access to basic surgical services, resulting in heavy human and economic toll.2-5 Despite this growing need, surgery has typically been a low priority on the global public health agenda. It has been viewed as too expensive, too complicated, and less integral to health than other areas of medicine.

Recent changes in the public health landscape, however, have led to a growing appreciation of the importance of surgery in realizing widespread improvements in health on a global scale. An evolving epidemiologic transition in which noncommunicable diseases (NCDs) and injuries are emerging as new leading causes of global death and disability, and mounting research documenting the feasibility and cost-effectiveness of surgical care delivery, have opened the eyes of many people.6,7 In addition, evidence that surgery is a necessary treatment modality across all disease categories and a shift in global health goals toward prioritization of equity and provision of universal health coverage (UHC) are causing more people to realize “that surgery is an indivisible, indispensable part of health care.”8-10

In recognition of the potential benefits of increasing surgery’s role in global health, The Lancet Commission on Global Surgery (LCoGS) was launched in January 2014.11 The initial LCoGS aims are to help facilitate recognition of the essential role of surgery not only to a properly functioning health care system but to the health of populations across the life course, to define the current state of surgical care delivery around the world, and to develop recommendations to improve the status of global surgical care.11 This article—an update to an article published in the February 2014 issue of the Bulletin—provides a current overview of the commission and its accomplishments over the last year.12

**The Lancet commissions**
The Lancet’s dedication to global health emerged in 2003 when it published a series of articles on child survival.13 Since then, The Lancet has published additional series and has formed multiple commissions focused on various global health topics, including investing in health, medical education, cancer care, and climate change. The purpose of these commissions is to guide and ignite policy change and to generate widespread and longstanding improvement for frequently neglected global health issues. The commissions’ work typically begins with the publication of a report in The Lancet, written by a multidisciplinary group of experts from around the world. The commissions’ efforts are then sustained through advocacy efforts and the publication of subsequent reports.

**LCoGS**
Global surgery is a field that aims to improve health and health equity for all people who are affected by surgical conditions or have a need for surgical care, with a particular focus on underserved populations in countries of all income levels, as well as populations in crisis, such as those experiencing conflict, displacement, and disaster.14 In early 2013 a small group of
surgeons dedicated to global surgery initiated discussions with The Lancet regarding the critical need for improvements in global surgical care delivery. The Lancet recognized this need, and plans to form a commission on global surgery began.

The strategy behind this initiative was to bring together a group of experts in health care financing, economics, and policy; look at the current picture of surgical care in low- and middle-income countries; and formulate recommendations for improving the delivery of surgical services around the world.

LCoGS is composed of three chairs, 22 commissioners, and numerous advisors and research assistants. The chairs are John G. Meara, MD, DMD, MBA, FACS, Boston Children's Hospital and Harvard Medical School, MA, (co-author of this article); Andy Leather, MB, BS, FRCS, King’s College London, U.K.; and Lars Hagander, MD, PhD, MPH, Lund University, Sweden. The commissioners, from 14 countries, have broad experience spanning surgical, anesthetic, obstetric, and oncologic care delivery through private, public, and non-governmental organizations (NGOs); health care policy, financing, economics, and research; and health and governmental systems.

The commissioners met three times in 2014 to discuss how to improve the state of global surgery and to develop the commission report. The first meeting took place in Boston in January 2014, with more than 100 participants from 18 countries. The purpose of this meeting was to introduce the commission process, determine areas of focus for subsequent work, and initiate discussions on key issues.

The second meeting took place in June in Freetown, Sierra Leone, with participants from 28 countries. Commissioners and participants discussed the results of deliberations and research conducted in the preceding five months and issued preliminary decisions on the key messages and recommendations for the commission report. The final commissioner meeting was in November in Dubai, U.A.E. Peer-review comments on the report were discussed and responses determined.

In addition to the three primary commissioner meetings, numerous regional meetings took place in 2014. The purpose of these meetings was to generate discussions with additional participants from around the world to guide the commission’s process and report content. Regional meetings convened in Cartagena, Colombia; São Paulo, Brazil; Chhattisgarh, India; and Singapore. (See Figure 1, page 26, for a chart of the commission’s work and timeline.)

The initial commission output will be a 32,000-word report published in The Lancet at the end of April (the executive summary of which will be published in the June issue of the Bulletin). This report will coincide with the first LCoGS launch in London, April 27 and 28, during which time the main findings and recommendations of the commission will be discussed in a public and interactive format. The report will be accompanied by a group of supporting primary research papers, in addition to a collection of global surgery teaching cases illustrating successful and unsuccessful methods of surgical care delivery. Publication of this initial body of work will mark the start of a long-term advocacy effort by the commission and supporting groups to improve global surgical care delivery.

Much of LCoGS’s success hinges on the global community’s widespread input into and involvement in its efforts. Therefore, in addition to the meetings described previously, LCoGS has worked extensively to engage as many stakeholders as possible, including various ministries of health; global health and development organizations, including the World Bank, the World Health Organization (WHO), and USAID; funders; surgical colleges; and patients and providers, regarding the status of global surgery and how to improve it. Multiple quantitative and qualitative surveys were conducted online, in-person, and via Skype or telephone to further elicit opinions on areas of global surgery importance. In addition, numerous research groups and individuals were asked to develop stand-alone global surgery publications and teaching cases for publication alongside the LCoGS report.

These engagement efforts yielded collaborations from more than 110 countries in 2014 (see Figure 2, page 27).
## FIGURE 1. COMMISSION PROCESS

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<td>Formation of working groups</td>
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<td>Announcement of commission with introductory comment and</td>
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<td>Call for comments and advice from community</td>
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### Notes
- The table provides a timeline of activities from 2013 to 2015, detailing key milestones and dates for the Commission on Global Surgery.
Building on prior efforts

LCoGS is not the first organized effort to advocate for surgery as a vital component of the global public health agenda. On the contrary—its work would not be possible without the efforts of many groups and individuals. For example, NGOs and humanitarian groups, such as Médecins Sans Frontières (MSF), which began its first surgical work in the Chad-Libya war, have demonstrated the feasibility of and need for provision of surgical services in remote and low-resource settings through direct care delivery. Global health leaders such as Halfdan T. Mahler, MD, former director-general of the WHO, have argued for surgery’s role in facilitating a comprehensive picture of health care, stating that “surgery clearly has an important role to play in primary health care and in the services supporting it.”

The WHO has initiated or supported several efforts to strengthen global surgical care delivery, such as those of the Global Initiative for Emergency and Essential Surgical Care. The Bellagio Essential Surgery Group was formed in 2007 to advocate for improved access to surgical care within sub-Saharan Africa, generating some of the most widely-referenced global surgery reports to date. Many additional groups, such as The Alliance for Surgery and Anesthesia Presence, the American College of Surgeons (ACS) Operation Giving Back program (OGB), and both the second and third editions of Disease Control Priorities, have worked tirelessly on
a number of global surgery efforts in the areas of education, research, advocacy and policy. These are just a few of many examples of past and current global surgery work. LCoGS hopes to augment these efforts in order to facilitate the development, implementation, and evaluation of surgical policy and to promote the delivery of surgical services worldwide.

The ACS and global surgery
Alongside the groups discussed previously, the ACS has long demonstrated a commitment to leadership, education, and participation in global surgery. In the midst of a growing interest among surgeons and residents in global surgery work, the ACS has taken the initiative to provide a gateway for surgeons in different stages of their careers to get involved in global surgery efforts around the world. Programs such as OGB provide U.S. surgeons with the opportunity to connect with their international counterparts to coordinate volunteer efforts and address the surgical needs of underserved populations. The ACS/Pfizer Surgical Volunteerism and Humanitarian Awards are given annually to recognize ACS members who have demonstrated dedication to giving back to underserved populations and to society.

In addition, the ACS offers a number of scholarships for international surgeons, providing opportunities to support clinical, teaching, education, and research activities. A significant contribution of the ACS to medical education around the world has been the development of the Advanced Trauma Life Support® (ATLS®) course. Since its introduction in 1978, ATLS has trained more than 1 million health care professionals in emergency and trauma care. The ACS is a strong advocate for global surgery advancement and stands at the front line of bringing surgical care to people most in need.

continued on next page

REFERENCES (CONTINUED)


A political environment in transition
The current political environment is poised for change. Attention is transitioning from the United Nations’ Millennium Development Goals—a set of eight goals to advance global health and development with target end dates of 2015—to the new and somewhat broader post-2015 Sustainable Development Goals (SDGs), Universal Health Coverage (UHC), and challenging commitments to equity and the end poverty. The only health-related SDG is to “ensure healthy lives and promote well-being for all at all ages.” The World Bank and WHO have targeted 80 percent coverage of essential health care services by 2030 as a measure of UHC.9 The World Bank also aims to end extreme poverty by 2030.46 None of these goals is attainable without including surgery as an integral component of a functional health care system. Focus on these goals, therefore, creates an unprecedented occasion to recognize the necessity of universal access to safe, affordable, surgical and anesthesia care in realizing widespread improvements in global health.

Looking forward
As noted previously, the commission report and first round of supporting research and teaching cases will be published in April in conjunction with the first launch in London, April 27 and 28.31 This will be followed by the first North American launch in Boston, May 6 and 7.32 These events will provide opportunities for discussion of LCoGs’ work and findings, offer attendees a chance to deliberate ways to improve global surgical care delivery, and strategize solutions for how surgical organizations such as the ACS can work together, as World Bank president Jim Yong Kim, MD, PhD, stated in his address at the inaugural commission meeting, “to build a shared vision and strategy for global equity in essential surgical care.”

REFERENCES (CONTINUED)

The second interviewee in this series is Michael T. Longaker, MD, MBA, FACS, a pediatric craniofacial surgeon at Stanford University, CA. Dr. Longaker is a mentee of Michael Harrison, MD, FACS, who was featured in the inaugural “Profiles in Surgical Research” article.* Dr. Longaker is an internationally recognized expert in the area of fetal wound healing and regenerative medicine.

Dr. Longaker is the Deane P. and Louise Mitchell Professor, Stanford University School of Medicine, CA, and professor of bioengineering and of materials science and engineering. He also is director, Program in Regenerative Medicine; co-director, Institute for Stem Cell Biology and Regenerative Medicine; and director, Children’s Surgical Research, Stanford University.

After completing his undergraduate degree at Michigan State University, East Lansing, Dr. Longaker matriculated at Harvard Medical School, Boston, MA. He traveled west to complete his general surgery residency at the University of California, San Francisco (UCSF), and obtained further training in plastic and reconstructive surgery at New York University (NYU), New York, and in craniofacial surgery at the University of California, Los Angeles (UCLA). He has been on faculty at Stanford since 2000. Dr. Longaker has been widely published and received numerous awards and accolades, including being selected as the first recipient of the Jacobson Promising Investigator Award in 2005.

Dr. Longaker was interviewed in October 2014 by Juliet Emamaullee, a chief resident in general surgery at Emory University, Atlanta, GA, and the Resident and Associate Society representative to the ACS Surgical Research Committee.

Thank you so much for participating in our interview series. Did you always know that you wanted to become a physician?

No, not at all. I come from Detroit, MI, and my father was a baseball player. No one in my family had been to college; however, I had the opportunity to attend Michigan State University and play basketball. I was on the team with Magic Johnson and we won a national championship in 1979. While I was in college, one of the faculty in radiology at Michigan State suggested that I consider pursuing a career in medicine, and that is how it all started. I am the first physician in my family.

How did you develop an interest in surgery?

When I was at Harvard for medical school, I became particularly interested in gross anatomy early on, which naturally led me to surgery. I initially thought about orthopaedic surgery, with my sports background; however, it did not excite me as much as some of the procedures I saw being done in general surgery. I liked the variety of what I saw in cardiac surgery, transplantation, gastrointestinal surgery, and so on. The combination of my interest in anatomy and the range of what you could do and make an acute difference is what drew me to general surgery.

When you entered surgical residency, did you have a particular interest in pediatric surgery, or were you undecided?

It is ironic that my mentor, Dr. Michael Harrison, had lived in the same exact room as me in Vanderbilt Hall at Harvard around 15 years prior. I kept hearing about UCSF, but being from the Midwest, I did not know anything about it. I went to interview there for residency and the chair of surgery was Paul Ebert, MD, FACS. He had played basketball and baseball at Ohio State, so we immediately hit it off. A pediatric surgeon, who turned out to be Dr. Harrison, also interviewed me. After the interview, I really wanted to be at UCSF and was fortunate to match there.

As a resident, I planned to go straight through my clinical training, [but] after three years we had a leadership transition. Dr. Ebert became Executive Director of the ACS, and Haile T. Debas, MD, FACS, became our new chair of surgery. Dr. Debas strongly suggested that I spend a year in the lab. I was reluctant to take time off for research, but I trusted his opinion, and was eventually assigned to Dr. Harrison’s lab. He asked me to investigate how fetuses heal wounds. My response was, “Why? You are the only person in the world thinking about healing fetuses.” He said, “Well, I think there may be a difference in the response to inflammation.” The rest is history, and he truly gave me the handoff of a lifetime. My one year in the lab became four, and working out the biology of how a fetus will not heal a wound with a scar until the third trimester, despite having the same genetic imprint, fascinated me.

Dr. Harrison advised me that pediatric craniofacial surgery might be a good fit for my clinical and research interests. After nine years at UCSF—five clinical and four in the lab—I spent two years at NYU for plastic surgery training and a 12th year of training at UCLA in craniofacial surgery. My lab time completely rerouted my entire career and life.

Were you able to stay active in research as you progressed through your clinical training?

Yes. Dr. Debas was incredibly supportive. After my fourth year in the lab, he advised me to either come back to complete my clinical training or stay on for another year and complete a graduate degree, so I could be hired as an assistant professor in research. I chose to complete my clinical training. Dr. Harrison
was wonderful and kept a small research team going under my direction. NYU and UCLA provided similar support while I was continuing my subspecialty training. I was able to keep my hand in it, despite having spent five years training between my formal lab time and my first clinical position.

How did you negotiate your first position at NYU?

Frank Spencer, MD, FACS, the chair of the department of surgery at NYU, made me an offer I could not refuse—an endowed position, the John Marquis Converse Professor in Plastic Surgery Research—as a first job. This position allowed me to build my academic career at a wonderful place. One of the attractions was that the division of plastic surgery had an Institute of Reconstructive Plastic Surgery that made a big commitment with hard money for me, which was pivotal to starting my own research team. I had some previous data built up, but this early institutional support allowed me to be successful with my first grant applications. Keep in mind that it was a different era—the National Institutes of Health (NIH) was funding around 33 percent of its applicants at the time. I was very lucky to start my faculty career at a time when NIH funding was more favorable, and I received the first four R01 [grants] I applied for.

What were your clinical responsibilities like early on? What proportion of your time was spent on research?

Dr. Spencer assigned me a position at what was then known as the Manhattan Veterans Affairs (VA) Hospital, New York. As a pediatric plastic surgeon, it was somewhat of an odd fit because there was not a lot of pediatric plastic surgery being done there. I ended up covering some general surgery and general reconstructive surgery. It was a place where I could manage my clinical responsibilities effectively because of the structured schedule with the fixed number of operative days per week and by working with the plastic surgery fellows. I also had a clinical appointment at Bellevue Hospital Center, New York, NY, which provided a different experience and a second salary line. For those reasons, I could remain clinically active while building my lab. The call at the VA and NYU was manageable and predictable. I would say my time was around 75 percent research and 25 percent clinical. It was a deliberate, brilliant move by Dr. Spencer to place me at the VA so I was not overwhelmed with clinical work early on.

It has become apparent during these interviews that having complete support from the leadership in your department is critical to starting a career as a surgeon-scientist, or else it is extremely difficult to become established.

I would agree. As you can imagine, it was not easy when I did it, even with the funding environment as positive as it was. In this day and age, where you are walking into expectations about relative value units for reimbursement, and teaching and building your lab, if you are not working in a department that values your nonclinical time—meaning the leadership provides you the time and resources to develop it within six years—I think it is very challenging.

How did receiving the Jacobson Award affect your career?

It allowed me the opportunity to conduct some high-risk experiments, meaning they were something I could not do on a grant. It allowed me to “swing for the fences.” It really allowed me to go to the next level, not just aim for the next “N=N+1” paradigm of the NIH, but really do something innovative. This award allowed me to do what I wanted to do without worrying about the specific aims, and that made a big, big difference. It led to a lot more funding. That was the greatest impact for me.
Here is the dilemma: [while] it is the greatest time ever to ask scientific questions, and the reagents, animal models, and technologies available are better than ever, the funding situation is so tenuous.

Did you have the opportunity to meet Dr. Jacobson?

I did—at the awards luncheon. What stood out to me was the remarkable passion and vision he and his wife have for supporting people. It was truly contagious, and I felt fortunate to have that interaction.

What are your thoughts on mentorship?

For me, it was critical. Dr. Debas and Dr. Harrison completely rerouted my entire life. You can have unproductive collisions with people in your life, and those two were the opposite. Dr. Debas emphasized the role of a surgeon-scientist, and Dr. Harrison gave me a dream project. I must say it is very humbling. I hope that I can have a fraction of that impact on the people I support. I try to inspire and support those who interact with me, particularly all of those residents who have come through my lab. Many of them have gone on to academic careers, which I find very rewarding. My role model for doing that is Dr. Harrison. I try to approach my mentees with [the following questions in mind]: “What can I do to further their career? How can I, so to speak, give them all the food, water, and sunlight to help them grow?” I make sure they understand that I am here to support their career, not mine, which is important.

What do you think are the biggest challenges for those of us who are embarking on a career as a surgeon-scientist?

Here is the dilemma: [while] it is the greatest time ever to ask scientific questions, and the reagents, animal models, and technologies available are better than ever, the funding situation is so tenuous. So, at a time when you can ask the most robust questions because of your reagents, working with the NIH budget is extremely challenging. For a new person entering the field, if they don’t have the right niche to protect them for five years or more, whatever it takes to get a grant (which is more than one to two years), then I think it is even more challenging. Selecting the right academic milieu, with the right amount of protected time and internal funding for an extended period of time, is a challenge. I think every young, motivated, and talented person deserves that. I worry that young surgeon-scientists will get turned off, that a whole generation will lose interest because of the funding level and so on. This is the time that those who are provided resources will benefit disproportionately.

It is worrisome to hear that some large academic surgery programs will not support NIH K awards for junior faculty because they cannot protect 50 percent of their time for research.

Yes, that is tough. It comes down to the sustainable, competitive advantage in your geographic area. When I came to Stanford 15 years ago, Tom Krummel [MD, FACS] and the Packard Children’s Hospital made a commitment to pediatric surgical research. We have intentionally sought out relationships with local industry and patrons, recognizing the opportunities of being in a community with significant industrial development and wealth. It is an exciting time for us at Stanford surgery for that reason.

Is there anything you can think of that we, as a community, can do to support surgeon-scientists?

We have to provide resources; we cannot just protect time. In this era, a scientist needs to develop significant, compelling delivery of data for every grant to maintain funding. You mentioned K awards; that 50 or 75 percent of protected time only works if the salary is $100,000. That cost sharing is real, so supportive junior faculty awards from sources other than the NIH are important to be able to do that. There are societies that are making important matching contributions, in addition to the local department. In California, we have the California Institute for Regenerative Medi-
Dr. Longaker with his family.

cine, which is yet another avenue for funding. Developing these types of alternative funding resources is essential for young surgeon-scientists so they have a chance to be successful.

Do you think it is realistic for surgeon-scientists to run their own lab, or do you think it is better to be in a more collaborative environment?

It depends on what you want to do. At Stanford, we tend to recruit independent investigators. They can come to my group meetings; we can collaborate, but it is up to them how much interaction occurs. It really depends on the individual. If you have an extensive pedigree and are ready to be an independent investigator, do that; if not, transition to that level in a mentored, collaborative environment. Either way will work. I remind people that research is not a sprint; it is a marathon.

Have you ever struggled with work-life balance?

Yes, definitely. My wife, Melinda, who is a dermatologist in private practice, and I have been married for 26 years. I met her when she was an anesthesia medical student at UCSF. She is my best friend in the whole world. We waited 12 years to have children, and we now have two children, Andrew, age 12, and Daniel, age 15. They are the light of our lives. I think being in academic medicine, you are never truly off duty. My wife started her career after me and finished long before me. I want our children to know who their father is, independent of his job. This is a top priority for me. I would say it is a constant struggle for me to be there to support my children at their academic, athletic, and social events, but that is a part of my life that I will not compromise.

♦

It sounds as though Stanford has a uniquely supportive environment.

We do, and providing that environment has been intentional. I have a master’s degree in business administration and have been heavily involved with fundraising through our local children’s hospital foundation. I probably have more experience than most surgeons in this area. That said, surgeons are uniquely positioned to be successful in fundraising. A surgeon’s connection to a grateful patient or role in making a critical diagnosis for family is a distinct pathway to facilitate these interactions. Surgeons can maximize this opportunity with the right guidance from a more experienced person to help them frame the question and connect with the donor. I also serve on an NIH Council, and that has been an interesting experience. It is important to get more surgeons on the NIH study sections.
ACS and ASE develop Simulation-Based Surgical Skills Curriculum for medical students

by Robert D. Acton, MD, FACS;
Daniel B. Jones, MD, FACS;
Kathleen R. Liscum, MD, FACS;
and Ajit K. Sachdeva, MD, FACS, FRCSC
The course was officially launched at Surgical Education Week in Orlando, FL, in April 2013 and was promoted by the ACS Division of Education at the 2013 Clinical Congress in Washington, DC, where it was demonstrated and discussed at the Medical Student Program.

The American College of Surgeons (ACS) and the Association for Surgical Education (ASE) Medical Student Simulation-Based Surgical Skills Curriculum—a collaborative effort by the College and the ASE—is a modular curriculum consisting of 25 basic instructional and skills topics considered to be universal for all physicians and undifferentiated medical students (see Table 1, this page). This is the first of three curricula that the ACS Division of Education and the ASE are developing for joint release to benefit young and developing surgeons (see Table 2, this page). These programs are a natural extension of the previous successful joint work of the ACS Division of Education with the Association of Program Directors in Surgery (APDS)—specifically, the ACS/APDS Surgery Resident Skills Curriculum.

Curriculum’s beginnings
The ACS/ASE Medical Student Simulation-Based Surgical Skills Curriculum began as a project by the ASE Simulation Committee in 2009 at Surgical Education Week in Salt Lake City, UT. At this meeting, an initial list of potential topics and authors was developed by expert consensus. Robert D. Acton, MD, FACS (co-author of this article), was charged with organizing the topics, generating a template, and establishing author instructions. Knowing that the ACS/APDS Surgery Resident Skills Curriculum was being released in phases, Dr. Acton contacted Gary Dunnington, MD, FACS, who led the development of the ACS/APDS Surgery Residents Skills Curriculum, for advice on managing such a project and formulating a template and author instructions.

Based on the suggestions and leadership of Daniel B. Jones, MD, FACS (co-author of this article), then-chair of the ASE Simulation Committee, conversations were initiated with Ajit K. Sachdeva, MD, FACS, FRCSC, Director of the ACS Division of Education (co-author of this article), to determine whether the College would be interested in collaborating on this project and

| Year 1 | Module 1: Abdominal Exam |
| Year 2 | Module 1: Basic Airway Management |
| Year 2 | Module 2: Communication—History and Physical and Case Presentation |
| Year 2 | Module 3: Foley Bladder Catheterization |
| Year 2 | Module 4: Intermediate Vascular Exam |
| Year 2 | Module 5: Nasogastric Tubes |
| Year 2 | Module 6: Sterile Techniques—Gloving and Gowning |
| Year 2 | Module 7: Surgical Drains—Care and Removal |
| Year 3 | Module 1: Arterial Puncture and Blood Gas |
| Year 3 | Module 2: Basic Knot Tying |
| Year 3 | Module 3: Basic Suturing |
| Year 3 | Module 4: Central Venous Line Insertion |
| Year 3 | Module 5: Communication—During Codes and Safe and Effective Handoffs |
| Year 3 | Module 6: Intermediate Airway |
| Year 3 | Module 7: Intraosseous IV |
| Year 3 | Module 8: Local Anesthetics |
| Year 3 | Module 9: Paracentesis |
| Year 3 | Module 10: Thoracentesis |

| Module 2: Basic Vascular Exam |
| Module 3: Breast Exam |
| Module 4: Digital Rectal Exam |
| Module 5: Female Pelvic Exam |
| Module 6: Male Groin and Genital Exam |
| Module 7: Venipuncture and Peripheral IV |

| Module 1: Basic Airway Management |
| Module 2: Communication—History and Physical and Case Presentation |
| Module 3: Foley Bladder Catheterization |
| Module 4: Intermediate Vascular Exam |
| Module 5: Nasogastric Tubes |
| Module 6: Sterile Techniques—Gloving and Gowning |
| Module 7: Surgical Drains—Care and Removal |

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| Module 2: Basic Vascular Exam |
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| Module 5: Female Pelvic Exam |
| Module 6: Male Groin and Genital Exam |
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| Module 7: Surgical Drains—Care and Removal |
participating in the development of the curriculum. Dr. Sachdeva agreed that a robust national medical student skills curriculum would be of value to students and would help them develop into well-educated physicians and surgeons. During Surgical Education Week 2010, a joint ACS/ASE Steering Committee was formed with Dr. Jones and Kathleen Liscum, MD, FACS, associate professor of surgery, Baylor College of Medicine, Houston, TX (co-author of this article), as Co-Chairs (see Table 3, page 38), and an agreement between the two organizations was signed. The ACS/ASE Steering Committee met twice a year for the next several years with monthly conference calls and support from the staff of the ACS Division of Education.

The expertise of the ASE Assessment and Evaluation Committee, chaired by Constance C. Schmitz, PhD, associate professor and director of educational research and development, University of Minnesota, Minneapolis, was added to the development of the curriculum. Dr. Schmitz brought an outstanding team of individuals together to work with all the authors to develop a standardized assessment tool for each module. Concurrently, the ACS/ASE Steering Committee decided to perform a formal needs assessment by surveying U.S. medical school clerkship directors and medical students about the initial list of topics generated by the ASE Simulation Committee. As a part of the needs assessment, fourth-year medical students at five medical schools also were surveyed (see Table 4, page 39). Each participant was asked if the skills should be included in a medical student simulation skills curriculum and, if so, what year each skill should be taught. The results of this survey validated the initial list and helped to define appropriate modules. Survey results were reported as a poster presentation at the ACS Clinical Congress in October 2012 and then published in *The American Journal of Surgery*. *

Curriculum modules

The authors wrote the modules between 2010 and 2012, using a template. It was critical that these modules included prerequisite knowledge, the skill, and common pitfalls, and did not simply feature skills existing in a vacuum. The curriculum was designed to move the learner along Bloom’s taxonomy of learning with the continual acquisition of knowledge and skills (see Table 5, page 39). Once a first draft was completed, the modules were edited and refined, and assessments were then added to a later draft. In the spring of 2013, the curriculum was ready for release to surgical educators across the country.

The course was officially launched at Surgical Education Week in Orlando, FL, in April 2013 and was promoted by the ACS Division of Education at the 2013 Clinical Congress in Washington, DC, where it was demonstrated and discussed at the Medical Student Program (see figure, page 39). The feedback from the students who reviewed the modules was positive, resulting in a surge in visits to the Web pages that house the curriculum.

The ACS/ASE Medical Student Simulation-Based Skills Curriculum can be accessed at [http://MedStudentSimSkills.facs.org](http://MedStudentSimSkills.facs.org), using your ACS user name and password. Once on the main page, the course is divided into the various modules with accompanying assessment tools across medical school years one through three. The modules are designed to be used in small groups with a faculty preceptor. However, they are comprehensive and self-contained so that students can complete them independently.

Both high- and low-fidelity simulators are used throughout the curriculum. It was imperative to make inexpensive, low-fidelity options available to hold down the costs for a program that would be implemented across an entire medical school class. Traffic to the website has been increasing since the initial release in April 2013, with surges corresponding to the Clinical Congress in 2013 and Surgery Education Week in 2014 (see figure, page 39).

In recognition of its inventive content, the curriculum was given the ASE Award for Excellence in Innovation in Surgical Education at the 2014 ASE meeting in Chicago, IL.

**TABLE 3.**
ACS/ASE MEDICAL STUDENT SIMULATION-BASED SURGICAL SKILLS CURRICULUM STEERING COMMITTEE

Daniel B. Jones, MD, FACS, Co-Chair
Kathleen R. Liscum, MD, FACS, Co-Chair
Robert D. Acton, MD, FACS, Chief Editor
Connie C. Schmitz, PhD, Assessment Editor

**MEMBERS:**
Linda M. Barney, MD, FACS, Dayton, OH (general surgery)
Patrice Gabler Blair, MPH, Chicago, IL
Andre R. Campbell, MD, FACS, San Francisco, CA (general surgery)
Ellen S. Deutsch, MD, FACS, Philadelphia, PA (otolaryngology)
Ajit K. Sachdeva, MD, FACS, FRCSC, Chicago, IL (general surgery)
Daniel J. Scott, MD, FACS, Dallas, TX (general surgery)
Stephen C. Yang, MD, FACS, Baltimore, MD (cardiothoracic surgery)

**ASSESSMENT CONSULTANTS:**
Adnan Alseidi, MD, EDM, FACS, Seattle, WA (general surgery)
Julia Corcoran, MD, MHPE, FACS, Chicago, IL (plastic and reconstructive surgery)
Marc A. De Moya, MD, FACS, Boston, MA (general surgery)
Loretto Glynn, MD, FACS, FAAP, Winfield, IL (pediatric surgery)
Mary Catherine Santos, MD, MSED, FACS, Hershey, PA (pediatric surgery)
Maura E. Sullivan, MSN, PHD, Los Angeles, CA (general surgery)

**ACS DIVISION OF EDUCATION STAFF:**
Patrice Gabler Blair, MPH
Kim Echter, C-TAGME
Tim Hotze
Cheryllnn Sherman

**Introduction of the curriculum**
The ACS/ASE Medical Student Simulation-Based Skills Curriculum was the focus of a workshop at the 2014 ASE meeting, which was aimed at establishing a core group of surgical educators who will begin concerted use of the models at their institutions to teach medical students. The goal of this initiative is to determine if the modules need to be further refined and to provide validity to the assessment model. At present, more data are required to assign levels of proficiency based on specific scores. Dr. Acton is leading this project in collaboration with surgical educators from throughout the U.S. and Canada. Key partners in this effort include Dr. Jones; Jaisa Olasky, MD, clinical instructor in surgery, Harvard Medical School, Boston, MA; Michael Kim, MD, clinical fellow, University of Toronto, ON; Synde Muratore, MD, a general surgery resident, University of Minnesota, Minneapolis; and Melissa Brunsvold, MD, FACS, critical care surgeon and assistant professor of surgery, University of Minnesota.

The team will focus on five modules: Abdominal Exam, Basic Airway Management, Sterile Technique–Gloving and Gowning, Basic Knot Tying, and Basic Suturing. According to members of the Steering Committee, these modules will provide the initial broad appeal to students and educators where surgeons can have the greatest impact. The Basic Knot Tying and Basic Suturing modules were highlighted as part of the Medical Student Program at the 2014 ACS Clinical Congress, San Francisco, CA. During this program, students learned and demonstrated their suturing and knot-
tying skills based on the curriculum module and its assessment. This experience provided a great opportunity for medical students interested in surgery to interact with surgical educators from throughout the nation.

The modules will also be a focus for the 2015 ASE annual meeting, April 21–25, in Seattle, WA. The theme of the meeting is simulation within surgical education, and a learning center will be available at the conference so that surgical educators can work with the modules during the meeting and return to their institutions with practical experience.

To encourage scientific investigation and use of this exciting curriculum, the ACS Division of Education and ASE Foundation are jointly sponsoring a $1,000 award for the best paper describing or demonstrating results from using the ACS/ASE Medical Student Simulation-Based Surgical Skills Curriculum. For details about the award, visit the ASE home page at www.surgicaleducation.com.

In recognition of its inventive content, the curriculum was given the ASE Award for Excellence in Innovation in Surgical Education at the 2014 ASE meeting in Chicago, IL. This award highlights the accomplishments of the outstanding collaboration between the ACS and the ASE, underscores the value of such partnerships, and demonstrates the shared common goal of providing outstanding education for tomorrow’s surgeons and surgical leaders. The strong partnership will continue, as the project will need to adapt and be updated to maintain its relevance in surgical education.

### TABLE 4. MEDICAL SCHOOLS INVOLVED IN NEEDS ASSESSMENT

- Harvard Medical School, Boston, MA
- University of California, San Francisco, School of Medicine
- University of Minnesota School of Medicine, Minneapolis
- University of Pennsylvania School of Medicine, Philadelphia
- University of Texas Southwestern Medical School, Dallas

### TABLE 5. MODULE TEMPLATE

- Brief overview
- Objectives
- Assumptions
- Suggested readings
- Description of the laboratory module
- Description of techniques and procedures with photos
- Common errors
- Expert performance video
- Supplies and station set-up
- Suggested module length
- Assessment, performance rating tool
The Physician Quality Reporting System (PQRS) originated in 2007 as a voluntary program. It was the first Centers for Medicare & Medicaid Services (CMS) initiative to link the reporting of quality data to physician payment. Calendar year (CY) 2014 was the last year that eligible professionals (EPs) and group practices could receive incentive payments for participating in the program. Beginning in 2015, the PQRS program has moved into a penalty-only phase. EPs who do not participate in the program in CY 2015 will face a 2 percent payment reduction that will be applied to their Medicare Part B fee-for-service (FFS) payments in CY 2017. The penalty will continue at 2 percent in future years.

In addition to the PQRS penalty for nonparticipation, EPs and group practices will be subject to an additional 2 percent or 4 percent penalty, depending on their group size, due to the value-based payment modifier (VM). The VM provides for differential payment to a physician or group of physicians under the Medicare physician fee schedule based on the quality of care furnished compared with cost during a performance period.* Thus, the VM program hinges on successful PQRS participation. Table 1 on page 41 shows the future penalties for the PQRS and VM programs.

This article discusses the changes to the PQRS program in 2015, as well as options available for surgeons who are seeking to avoid the PQRS and VM penalties.

### 2015 PQRS reporting options

There are several ways that surgeons can participate in the PQRS program. Surgeons, whether they are individual practitioners or part of a group practice, may report individually and choose one of the methods from the “EP Reporting Options” listed in the figure on page 42. EPs can participate individually in the PQRS program through one of four methods: claims-based reporting, traditional registry-based reporting, qualified clinical data registry (QCDR)-based reporting, or electronic health records (EHR)-based reporting. A detailed description of each option is provided in the next section.

Surgeons who are part of a group should note that group practices also may collectively report PQRS data by selecting a reporting method from the group practice reporting option (GPRO) listed in the document available on the CMS website.† Groups interested in using the GPRO must send a request to CMS by June 30, 2015. Groups must receive CMS approval to report to PQRS via the GPRO. Surgeons who are part of a group practice but would like to report individually should call the CMS QualityNet Help Desk at 1-866-288-8912 to ensure that their institution has not already enrolled them for the GPRO.

Note that this column focuses on the individual EP reporting options. Successful compliance with any of the appropriate reporting options will allow

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TABLE 1. PQRS AND VM FUTURE PENALTIES

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<td>Year penalty is applied</td>
<td>2015</td>
<td>2016</td>
<td>2017</td>
<td>2018</td>
<td>2019</td>
<td>2020</td>
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<tr>
<td>CMS program</td>
<td>PQRS</td>
<td>-1.5%</td>
<td>-2%</td>
<td>-2%</td>
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<tr>
<td>Value-based payment modifier†</td>
<td>-1%</td>
<td>-2%</td>
<td>up to -4%</td>
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<tr>
<td>Total potential penalty</td>
<td>-2.5%</td>
<td>-4%</td>
<td>-6%</td>
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*Penalties are applied two years after the performance year (for example, lack of participation in 2015 will result in a penalty that will be applied in 2017).

†The VM hinges on PQRS participation. Lack of PQRS participation may also result in a VM penalty, depending on group size.

EPs and GPROs to avoid the 2015 PQRS penalty of 2 percent and to potentially avoid the VM penalties of 2 percent or 4 percent.

PQRS options for individuals

Claims-based reporting option
The claims-based reporting option for 2015 requires EPs to report nine PQRS measures covering a minimum of three National Quality Strategy (NQS) domains for at least 50 percent of the Medicare Part B FFS patients to whom they provided care from January 1 to December 31, 2015. Of these nine measures, one must be from a list of what CMS defines as cross-cutting measures. These are broadly applicable measures that apply to many specialties.

Three individual claims-based measures are directly relevant to surgery:

• #21 Perioperative Care: Selection of Prophylactic Antibiotic—First or Second Generation Cephalosporin

• #22 Perioperative Care: Discontinuation of Prophylactic Parenteral Antibiotics (Non-Cardiac procedures)

• #23 Perioperative Care: Venous Thromboembolism Prophylaxis (when indicated in all patients)

Reporting on these three measures will satisfy three of the nine measures required for claims-based reporting and will cross only one NQS domain—patient safety. Therefore, EPs will need to report on six additional PQRS measures that cross two additional NQS domains and include one cross-cutting measure to satisfy the claims-based reporting option.

Traditional registry-based reporting option
To use the traditional registry-based reporting option for PQRS reporting, EPs must participate through a CMS-approved registry. CMS typically publishes a list of approved registries in the spring. The American College of Surgeons (ACS) Surgeon Specific Registry (SSR) has been an approved PQRS registry in previous years and is awaiting CMS approval for PQRS reporting in 2015. The ACS will inform Fellows of the SSR’s approval status via ACS NewsScope and the SSR website.

EPs can report through the registry-based reporting option in one of two ways. One way is to report on individual measures, and the other is to report on measures groups. Note that reporting on either individual measures or measures groups simply refers to the way a provider or group decides to report measures for PQRS, and this terminology should not be confused with reporting measures as an individual EP or as group practice reporting via the GPRO.

EPs reporting through the individual measures reporting option are required to report on nine PQRS measures covering at least three NQS domains for at least 50 percent of their Medicare Part B FFS patients seen January 1 through December 31, 2015. Of these nine measures, one must be from the cross-cutting measures list referenced earlier. Although the requirement for reporting individual measures through a registry is similar to that of the claims-based reporting option, unlike claims-based reporting where cases must be submitted actively on claims, in a registry EPs can retroactively enter PQRS information on qualifying cases.

EPs who report through the measures group reporting option are required to select one measures group and report on 20 cases—at least 11 cases of which must
be Medicare patients. EPs should review the list of allowed procedures for the measures group that they select and identify 20 patients. For surgeons, there is one relevant measures group for 2015: the General Surgery Measures Group. In previous years, the Perioperative Care Measures Group was also available for surgeons to report on, but this group has been removed from PQRS 2015. However, some of the measures (noted earlier) from the Perioperative Care Measures Group can be reported individually through claims or the registry-based individual reporting option.

For CY 2015, the General Surgery Measures Group consists of seven measures, shown in Table 2 on page 43 with the PQRS measure numbers.

Two new measures, #130 and #226, have been added to the group for 2015. Table 3 on page 44 has a list of the 2015 PQRS procedures approved for the General Surgery Measures Group. Surgeons must carefully read the specification for measures #354, #355, #356, #357, #358, #130, and #226 to ensure that they can report on the applicable PQRS measures within the group on each of the 20 (majority Medicare) patients from
TABLE 2. 2015 PQRS GENERAL SURGERY MEASURES GROUP

- #354 Anastomotic leak intervention
- #355 Unplanned reoperation within the 30-day postoperative period
- #356 Unplanned hospital readmission within 30 days of principal procedure
- #357 Surgical site infection (SSI)
- #358 Patient-centered surgical risk assessment and communication
- #130 Documentation of current medications in the medical record*
- #226 Preventive care and screening: Tobacco use: Screening and cessation intervention*

*New for 2015

January 1 through December 31, 2015. It is particularly important to note the specifications for measure #354, as it should only be reported if a patient has a procedure performed specific to gastric bypass surgery or colectomy. The measure specifications for the General Surgery Measures Group can be found on pages 337–354 of the CMS Measure Group Manual.

EHR-based reporting option
In order to participate via the EHR-based reporting option, EPs need to submit nine measures covering at least three NQS domains. EPs should work with their EHR vendor to make sure that the EHR system can submit data on the PQRS-approved electronic measures for CY 2015.

QCDR reporting option
The qualified clinical data registry (QCDR) is a CMS-approved entity that collects clinical data for the purpose of patient and disease tracking to improve quality of care provided to patients with specific health care conditions. The QCDR reporting option allows entities approved as a QCDR to determine their own quality measures; therefore, EPs who participate in the QCDR are not required to report on traditional PQRS measures. In comparison with traditional PQRS measures, QCDR measures are intended to be more relevant, clinically appropriate, and actionable for EPs who are participating in a clinical data registry.

Similar to traditional registries, QCDRs must also receive CMS approval. CMS will publish a list of approved QCDRs, likely in the spring. The ACS Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) was approved as a QCDR in CY 2014 and, at press time, was awaiting CMS approval for CY 2015.

EPs interested in participating in PQRS through a CMS-approved QCDR must report at least nine individual measures, including at least two outcome measures (or, in lieu of two outcome measures, at least one outcome measure and one of the following other types of measures—resource use, patient experience of care, efficiency/appropriate use, or safety), covering at least three NQS domains, and report each measure for at least 50 percent of their applicable patients (Medicare and non-Medicare) January 1 through December 31, 2015.

The VM’s effect on surgeons
For 2015, surgeons may be subject to an additional penalty under VM, which will also be applied to their Medicare Part B FFS payments in CY 2017. The VM program provides incentives or penalties based on CMS’ analysis of a provider’s cost and quality. PQRS reporting satisfies part of the quality component of the VM determination.

Essentially, payment penalty amounts differ based on group size, successful or unsuccessful PQRS participation, and performance. For example, in 2015, solo practitioners and groups of up to nine providers who unsuccessfully report to the PQRS will be subject to a 2 percent penalty under the PQRS program and an additional 2 percent penalty under the VM. Penalties...
will be applied to these providers in CY 2017. If a surgeon belongs to a group practice of 10 or more practitioners in 2015, and that group does not participate in one of the PQRS GPRO mechanisms referenced previously, or if 50 percent of that group does not participate in PQRS via one of the individual reporting options listed in the figure on page 42, this surgeon will receive a 2 percent penalty under the PQRS program and an additional 4 percent penalty under the VM in CY 2017. Hence, participating in the PQRS program in CY 2015 is imperative to avoid significant payment penalties.

Resources for surgeons
As reporting requirements and penalties for the CMS quality programs increase, the ACS continues to create tools and resources to assist surgeons in their efforts to comply with program requirements. Pending CMS approval, the ACS will have two registries that support 2015 PQRS reporting—the ACS SSR and the MBSAQIP.

Additionally, Fellows are encouraged to use CMS feedback tools to improve their participation in quality programs. CMS publishes annual Quality and Resource Use Reports (QRURs) that contain quality data based on PQRS reporting plus information on resource use by applying the measures and benchmarks that CMS has selected for the VM. QRURs are available as a resource to assist EPs and group practices to improve their performance on quality and resource-use measures. ♦

TABLE 3. 2015 PROCEDURES ALLOWED FOR GENERAL SURGERY MEASURES GROUP*

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WHAT SURGEONS SHOULD KNOW ABOUT...

Expired and expiring ACA provisions

Most of the media coverage surrounding the Affordable Care Act (ACA)—also known as Obamacare or the 2010 health care reform law—seems to focus on how the law is being implemented, how it might be repealed, or whether the courts will strike it down. In the midst of all this debate, it is sometimes easy to forget that many programs and funding streams contained in the legislation were temporary. In fact, a number of provisions of the bill have already expired or are set to expire in the near future, some of which never received funding.

What types of programs are expiring?
The most well-known portions of the law are considered permanent and have no expiration date. Portions of the law that will remain in place, barring congressional repeal or a U.S. Supreme Court ruling declaring the legislation unconstitutional, include those pertaining to the state insurance exchanges; the individual and employer mandates; insurance reforms, including removal of annual and lifetime limits, essential benefits package, allowing children to stay on their parents’ plans until age 26, and so on; and Medicaid expansion, to name a few.

Of the expiring provisions, only a few affect so-called mandatory funding—that is, spending that happens automatically without additional congressional action. This includes items such as the recently expired incentive payment for primary care physicians in Medicaid.

Most of the expired and expiring provisions fall into the category of so-called discretionary programs. Discretionary spending is authorized by Congress but must be funded separately through the annual appropriations process. More than 50 discretionary programs authorized through the ACA have already expired, and more are set to do so this year. Many of these initiatives have never received funding.* Examples include some initiatives that the American College of Surgeons (ACS) has supported—for instance, the Pediatric Subspecialty Loan Repayment Program, which was not funded prior to expiring at the end of federal fiscal year 2014.

How will expiring provisions affect rural surgeons and their patients?
The ACA authorizes a Medicare incentive payment program for major surgical procedures provided by general surgeons in Health Professional Shortage Areas (HPSAs). This initiative, which is intended to increase access to surgical care in shortage areas, is called the HPSA Surgical Incentive Payment program (HSIP) and is commonly known as the general surgery bonus program.† Of the expected expired incentive payment for primary care physicians in Medicaid.

Most of the expired and expiring provisions fall into the category of so-called discretionary programs. Discretionary spending is authorized by Congress but must be funded separately through the annual appropriations process. More than 50 discretionary programs authorized through the ACA have already expired, and more are set to do so this year. Many of these initiatives have never received funding.* Examples

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Surgeons began receiving this incentive payment after January 1, 2011, but it is set to expire at the end of this year.

The College will advocate to preserve and extend this program so rural patients will continue to have access to surgical care in shortage areas.

What do expiring ACA provisions mean for trauma care?
The ACA reauthorized and expanded several trauma programs. Unfortunately, despite the efforts of the ACS and a number of other stakeholder organizations, the four trauma programs included in the bill have not received funding and are now expired or expiring. Of the four programs authorized in the bill, two expired on September 30, 2014—the end of the last fiscal year. These programs would have provided grants to states for planning, implementing, and developing trauma care systems, and pilot projects to design, implement, and evaluate innovative models of emergency care systems. The other two provisions were the Trauma Care Center Grants designed to maintain the core missions of trauma centers, compensate them for losses from uncompensated care, and provide emergency support to centers at risk of closure; and the Trauma Service Availability Grants used by states to address shortfalls in trauma services and improve access to essential lifesaving care, which will expire on September 30.

The College has long advocated for funding to support trauma care, and the ACS Division of Advocacy and Health Policy is working with champions in Congress to reauthorize these programs so that efforts to secure funding can continue. For example, in the 113th Congress, the House of Representatives passed ACS-supported legislation, the Access to Life-Saving Trauma Care Reauthorization Act, but the bill stalled in the Senate.

The legislation has been reintroduced in the 114th Congress as H.R. 648, along with companion legislation, the Access to Life-Saving Trauma Care for All Americans Act, H.R. 647. The House Committee on Energy and Commerce has reviewed and approved both bills. At press time, they were headed to the House floor, where they were likely to be passed with little opposition. The College is working diligently to inform senators of the importance of these programs in order to facilitate their passage. Enactment of this legislation is only the first step. If these bills achieve passage and are signed by the president, ACS advocacy efforts will shift to the appropriations process to try to secure funding for these important programs.²

How can surgeons help advocate for extending these important programs?
Surgeons can help by letting their representatives and senators know that these programs are important to them and their patients. The College provides many educational programs and resources to facilitate this type of activity, including the following:

• The annual Leadership & Advocacy Summit, which will take place April 18–24 this year (more information can be found at www.facs.org/advocacy/participate/summit)

• The SurgeonsVoice website (www.surgeonsvoice.org), which contains issue briefs and draft e-mail communications to send to your congressional delegation

• Occasional e-mail alerts regarding time-sensitive votes

Consider taking advantage of these opportunities to let Congress know which ACA and other health care programs are important to you and the patients you serve. ♦

The rural general surgeon is an endangered species. Although studies of current and future surgery workforce needs reach varying conclusions based on the methodology and assumptions applied, most researchers agree that a marked maldistribution of surgeons exists and that rural areas in particular lack sufficient general surgeons to provide adequate surgical care.1 The shift of surgery trainees toward specialization compounds the deficit of rural general surgeons and may further threaten the availability of rural surgical care.

Although residents are turning away from rural general surgery practice for multiple reasons, notable concerns include a lack of exposure to general and rural surgery in training; lack of exposure during residency to a wide breadth of services and skills that rural general surgeons are expected to deliver, including basic orthopaedic, urologic, hand, gynecologic, therapeutic endoscopic, and otolaryngologic procedures; perceived challenges of on-call requirements; and limited opportunities to engage in lifelong learning. Research has shown that nearly 50 percent of a rural surgeon’s practice is composed of basic and complex endoscopic procedures, with another 12 percent centered on subspecialty procedures, including obstetrics and gynecology, orthopaedic, otolaryngology, urology, and thoracic.2-4

A variety of independent and university residency programs have a history of training surgeons who enter rural practice directly after residency. More recently, an increasing number of program directors have demonstrated a renewed commitment to meet the needs of the rural populace, especially if these programs are located in states with a significant rural population. Specifically, program administrators are exploring the addition of rural sites or tracks to their residencies. Whether the residency is already established and seeks to add an opportunity for a rural training experience or the administrator is developing a new general surgery residency program with a rural focus, key steps can be taken to establish a successful program. There are several existing models that can be employed to facilitate the process.

**Existing models**

Some highly successful models for training a broadly competent rural general surgeon are exemplified by programs such as those at Gundersen Medical Foundation, LaCrosse, WI; Mary Imogene Bassett Hospital, Cooperstown, NY; and the University of North Dakota School of Medicine and Health Sciences, Grand Forks. These residency programs all share certain characteristics, including few or no competing surgical specialty residency programs, the presence of both specialty faculty and general surgeons, and close relationships with rural hospitals. These institutions
have designed their programs to meet the educational and training needs of general surgery residents who plan to practice in a rural environment. New academic programs, such as the one established in 2014 at the University of South Dakota Sanford School of Medicine, Sioux Falls, have adopted this model.

In the past few years, several university programs that are located in states with significant rural populations have developed independent rural residency tracks to which medical students apply directly. Among these are the University of Wisconsin, Madison, and the University of North Dakota. Other programs, such as the one at Oregon Health and Science University, Portland, have embedded a rural track in their general surgery residency, which does not require a separate application.

Another model employed by general surgery residencies is to offer an elective or required rural rotation at one or more levels of training. These experiences are universally popular, as they offer the opportunity for residents to connect with a rural surgeon mentor, to perform a broad range and large volume of procedures, and to develop a sense of being part of the practice and of the community. Programs that offer rural surgery rotations include the University of Tennessee at Knoxville and Chattanooga; the University of West Virginia, Morgantown; Gundersen Health System; and the University of Louisville, KY.

Factors to consider
All of these models are effective in exposing residents to the exceptional nature of rural general surgery practice. Nonetheless, each is unique with respect to the availability of rotation sites, approaches to funding, the availability of suitable faculty, and the duration of assignments. Several factors need to be taken into account by the surgical programs and rural communities that are interested in developing rural surgery sites, tracks, or programs.

The first and most critical consideration is selecting the appropriate site or sites for the training to take place. The ideal rural training site has a case volume that is large and varied enough that the residents will gain adequate experience. A balance of smaller office or ambulatory procedures, larger inpatient procedures, and endoscopic procedures is ideal, with an approximate volume of 30–50 cases per month. The goal of the program should match the available resources of the rural site with the need for the residents to gain experience in specific types of cases.

If the purpose of the program is to provide residents with the skills needed to practice surgery in an isolated rural setting with no surgical specialists, then it is imperative that the trainee be adequately exposed to cesarean sections, fracture management, urologic and otolaryngologic emergencies, and surgical conditions of the hand; a hospital with infrequent cases of these types may be a poor match. Almost all rural sites will offer a rich experience in gastrointestinal (GI) endoscopy, as this procedure is a hallmark of rural general surgery. GI endoscopy experience alone, however, will not provide the resident with adequate exposure to the breadth of skills a rural surgeon must possess.

It is important that the rural hospital administration, the surgical attendings, and the nursing and ancillary staff be unified in their commitment to host a trainee. Visits to the site by the program director, the department chair, and a surgical resident to meet with all
constituencies, learn about the program, and to pose questions are highly recommended. The surgeons selected as mentors must be American Board of Surgery-certified or have specialty qualifications that are acceptable to the Residency Review Committee (RRC) for surgery; should be Fellows of the American College of Surgeons or another professional surgical society; and must be highly regarded in the region for their refined surgical skill, clinical decision making, and ethics.

The surgeons at the rural practice must agree with the parent program about the optimal length of the rotation and the appropriate resident level (postgraduate year). Faculty members who have extensive prior experience working with residents may be more willing to entrust their patients to a junior learner. Both the faculty and administration of hospitals that participate in rural surgery training can reap many potential benefits, including the exposure of their surgeons and surgical staff to the educational milieu, improved surgeon and staff satisfaction, exposure to leading-edge surgical techniques and procedures, and an advantage in recruiting surgical partners who had previously rotated there as residents.

The details of the proposed rotation must be thoroughly discussed with the hospital administration and faculty surgeons. Compliance with all Accreditation Council for Graduate Medical Education (ACGME) regulations, including those pertaining to duty hours, supervision policies, and educational sessions (such as weekly morbidity and mortality conferences) must be ensured. Curricular goals and objectives should be clearly delineated. Methods and details of formative feedback and summative evaluation of the residents must be established.

Terms of funding for the rotation must be defined, including benefits and housing details. The resident's salary may be provided by either the parent institution or the rural site. Some programs have secured state funding or grants. The parent institution and rural site must identify appropriate housing in proximity to the rural hospital and decide which institution is responsible for its cost. The issue
of which institution provides medical liability insurance also must be determined.

All of the previous details of the program must be included in the program letter of agreement and master contract between institutions before the program begins. The parent program must apply to the ACGME RRC for surgery in advance of any new program or rotation of six months or more in length. Shorter elective or required rotations do not necessitate advanced approval, although the rotation must still comply with all ACGME regulations.

The ACS intervenes
The American College of Surgeons (ACS) offers several resources to help establish rural surgical programs, training, and sites. One type of experience that may have relevance for the future of rural general surgery is the ACS Transition to Practice (TTP) Program, which is designed to help better prepare new graduates of surgical residency for independent practice. These programs may be customized for a graduate who has a specific type of future practice location in mind and are ideal for preparing a new graduate to enter a rural practice. TTP fellows are best placed in independent hospitals without a general surgery residency program, to avoid any erosion of surgical resident case volume or operative experience. Details about the TTP Program are available at www.facs.org/education/program/ttp.

In addition, the members of the Education Committee of the ACS Advisory Council for Rural Surgery are available to consult with any institution interested in developing a rural site or track. Interested parties should contact Karen Deveney, MD, FACS, at deveneyk@ohsu.edu for further information.

Rural surgeons also are encouraged to contact the program director of the general surgery training program in their state to express their interest in serving as mentors to surgical trainees and helping to ensure the future of rural general surgery.

Finally, medical students with an interest in rural general surgery as a career can locate a list of general surgery residency programs that provide rural surgery experiences in residency at www.facs.org/education/resources/residency-search/specialties/rural.

REFERENCES
This year marks the 30th anniversary of the publication of the National Surgical Adjuvant Breast and Bowel Project (NSABP)-R01, a critical trial reported in the *New England Journal of Medicine*, which solidified the role of multimodality therapy for rectal cancer. This trial clearly showed the benefit of adding pelvic radiation to the treatment regimen for locally advanced rectal cancer, with resultant decrease in the local recurrence rate to 16 percent from 25 percent.* This changed the standard of care in the U.S., heralding modern treatment modalities for this type of cancer.

Many advances in cancer treatment have occurred over the last three decades: Optimized administration and timing of radiation, widespread adoption of total mesorectal excision (TME), and the implementation of more effective systemic chemotherapy. The current treatment standard includes neoadjuvant chemoradiation with 5-Fluorouracil as a radiosensitizer, TME, and adjuvant chemotherapy, including 5-Fluorouracil and Oxaliplatin. Reported local recurrence rates are now routinely at less than 10 percent. However, although oncologic results are impressive, trimodality therapy is arduous and sometimes is abandoned before it is completed. Consequently, there is still a need for improvement.

**PROSPECT for individualized therapy**

The Alliance for Clinical Trials in Oncology Cooperative Group’s Preoperative Radiation or Selective Preoperative Radiation and Evaluation before Chemotherapy and TME (PROSPECT) trial challenges the current treatment paradigm. The PROSPECT trial attempts to individualize treatment by using radiotherapy selectively rather than reflexively.

The rationale for using radiation selectively in rectal cancer patients includes:

- A better understanding of rectal cancer risk stratification—not all patients are at high risk for local recurrence

- Risk of short- and long-term toxicity

- The fact that many patients fail to complete the prescribed multimodality regimen

- The desire to move systemic therapy proximally to potentially reduce distant recurrence, which is emerging as the major threat to longevity for locally advanced rectal cancer patients

In this phase II/III multicenter trial, neoadjuvant FOLFOX (Oxaliplatin, Leucovorin, and 5-Fluorouracil) with selective use of chemoradiation (5-Fluorouracil and pelvic radiation) is being tested against the current standard of preoperative chemoradiation (5-Fluorouracil and pelvic radiation) for rectal cancer patients undergoing low anterior resection with TME (NCCTG-N1048; N1048; NCT01515787; see figure, page 52).† By randomizing patients to one of these two arms, the PROSPECT trial provides an opportunity to reduce the use of pelvic radiation in patients who might not benefit from it.

The primary endpoint for the phase II portion of the trial is R0 resection rate. If the trial achieves an equally high R0 resection rate in the intervention arm as in the control arm, the study will proceed to phase III. Phase III will involve evaluating

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time to local recurrence and disease-free survival.

Adult patients (age ≥18 years) with biopsy-proven rectal adenocarcinoma with the following characteristics are eligible for the trial:

• Clinical stage T2N1, T3N0, or T3N1 (stage IIA, IIIA, or IIIB) as determined by examination, computed tomography scan, and either magnetic resonance imaging or ultrasound

• Candidate for sphincter preservation TME before neoadjuvant therapy

• No encroachment on the mesorectal fascia based on preoperative imaging

Additional criteria include: Adequate performance status; satisfactory laboratory studies; no obstructive symptoms; no prior pelvic radiation, chemotherapy, or malignancy.

The study is open across the U.S., and 286 patients were enrolled as of February 20. The most recent protocol amendments approved by the National Cancer Institute Adult Central Institutional Review Board were intended to facilitate participation and accrual. These revisions were as follows:

• Eliminated surgical credentialing but maintained surgical quality assurance

• Removed central radiation treatment planning but maintained radiation quality assurance

• Removed tumor height requirement, and included some administrative simplifications

The role of surgeons

Surgeons are integral to the success of this clinical trial for the following reasons:

• Surgeons represent a port of entry for accrual. Surgeons are often the first referring physicians for patients with newly diagnosed rectal cancer and are responsible for coordinating multidisciplinary care. Thus, surgeons are well-positioned to introduce this trial to eligible patients and to guide enrolled patients through the trial.

• Surgeons play a key role in evaluating and identifying potential patients. Surgical assessment of clinical tumor stage, circumferential resection margin, endoscopic tumor location, and, most importantly, candidacy for sphincter preservation form the basis for determining eligibility.

• Surgeons must maintain high-quality resection by TME for results to be interpretable. Because TME and pelvic radiation are the key local treatment modalities and this trial tests the feasibility of omitting radiation, quality of TME must be uniformly maintained.

The members of the Alliance and the American College of Surgeons Clinical Research Program find this clinical trial’s accrual rates to be encouraging and believe it has the potential to change the current paradigm of rectal cancer treatment. All U.S. cooperative groups have endorsed this trial. Surgeon participation is pivotal, and you are invited and encouraged to participate.

For additional information, contact Alessandro Fichera, MD, FACS, at afichera@uw.edu, or Martin R. Weiser, MD, FACS, at weiser1@mskcc.org.
Eisenberg Award presented to ACS NSQIP for quality improvement efforts

The Joint Commission and the National Quality Forum (NQF) have honored the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP®) with the 2014 John M. Eisenberg Patient Safety and Quality Award. The Eisenberg Award was presented to the recipients during NQF’s 2015 Annual Conference, March 23–24, in Washington, DC.

Each year, the Eisenberg Award recognizes the major achievements of individuals and organizations in advancing patient safety and quality of care. The award recipients’ achievements must be consistent with the aims of the National Quality Strategy, led by the Agency for Healthcare Research and Quality (AHRQ) on behalf of the U.S. Department of Health and Human Services, with an emphasis on better, more affordable care, and healthy people and communities.

Honoring innovation
The Eisenberg Award is presented in three categories: Individual Achievement, National—System Innovation in Patient Safety and Quality, and Local—System Innovation in Patient Safety and Quality.

ACS NSQIP was recognized at the National level, and the following recipients received an award in the other categories:

• Individual Achievement—Mark L. Graber, MD, FACP, senior fellow, Health Care Quality and Outcomes Program, RTI International

• Local level—North Shore-LIJ Health System’s initiative to reduce sepsis mortality

The patient safety awards program, launched in 2002 by The Joint Commission and NQF, honors the late John M. Eisenberg, MD, MBA, former Administrator of AHRQ. Dr. Eisenberg also was a member of the founding board of directors of NQF. In his roles as AHRQ Administrator and Chair of the federal government’s Quality Interagency Coordination Task Force, he was a passionate advocate for patient safety and health care quality and personally led AHRQ’s grant program to support patient safety research.

ACS NSQIP improves quality
The Joint Commission and NQF recognized ACS NSQIP for the many quality improvement benefits it provides to hospitals by assisting in the measurement
"For the past decade, ACS NSQIP has proven to be an effective measurement system for hospitals and surgeons around the world. As health care continues to expand its quality improvement efforts, it is important to use reliable and valid measurement systems such as ACS NSQIP to drive toward the elimination of patient harm."

—Dr. Chassin
Where’s the fire?

by Richard J. Fantus, MD, FACS, and Edmundo A. Rivera, MD

To say the understanding and control of fire was a critical point in human evolution would be an understatement. With the control of fire, soon after came the advent of cooking and advancements in socialization and warfare. Archeological evidence is not definitive on exactly when our hominid ancestors first mastered flame as a tool, but the earliest secure evidence for controlled burning occurred during the early Acheulean occupation, approximately 1 million years ago, and so fire exposed early civilizations to a new mechanism of injury—burns.

Degrees of burn injury

Most current surgical texts have separated themselves from the six degrees of burn injury first described by Guillaume Dupuytren, a French anatomist and military surgeon, in 1832. The lesser-known fourth-, fifth-, and sixth-degree burns involve thermal destruction of the fascia, muscle, tendon, and bone.

The more clinically common thermal injuries are described in terms of degree or thickness. Superficial, or first-degree, burns involve only the epidermis. The most obvious example would be a sunburn. Second-degree burns can be classified into superficial and deep, partial thickness. Superficial partial thickness injuries extend into the papillary dermis, typically forming blisters. Underneath these blisters lies a pink, moist, blanching, and hypersensitive wound bed that will typically heal with proper wound care in two to three weeks. Deep partial thickness injuries extend into the reticular dermis and may also blister, but they typically have a dry, pink and white, mottled appearance. Even with proper wound care and therapy, these injuries may stall in the healing process and require excision and grafting. Full-thickness, or third-degree, burns involve the entire dermis and may extend into the subcutaneous tissue. These injuries appear dry, leathery, and firm and may be accompanied by charred tissue resembling parchment paper. These wounds are typically insensate due to destroyed nerve endings. Early excision and grafting of these injuries reduces morbidity, mortality, and hospital length of stay.

Morbidity and mortality

From 2010 to 2012 annually an estimated 2,465 civilian fire fatalities resulted from 1,700 fires in residential buildings and an estimated 366,900 residential building fires in the U.S.
residential building fires in the U.S.\textsuperscript{3} Understandably, regional differences in economic status, housing construction, and heating devices influence the death rates resulting from residential building fires or house fires. The most common cause of such fatalities is careless smoking, followed by arson, and the third most common cause is defective or inappropriately used heating devices. Scalds are the most frequent type of thermal injury overall, but fire and flame injuries are the most frequent to require hospital admission.\textsuperscript{4} The total annual cost of burns, including medical costs and costs of lost productivity, is estimated to be $7.5 billion.\textsuperscript{4}

To examine the occurrence of burn-related injuries in the National Trauma Data Bank\textsuperscript{®} (NTDB\textsuperscript{®}) research dataset for 2013, admissions medical records were searched using the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) diagnoses codes. Specifically searched were records for injuries from fire/flame containing an external cause of injury code (E-code) E890–E899 (unintentional burn related injuries from conflagration, highly inflammable material, burning bedclothes, ignition of clothing, controlled fire, other specified fire, and unspecified fire). A total of 27,616 records were found, of which 21,252 contained a discharge status, including 16,210 patients discharged to home, 1,993 to acute care/rehab, and 1,324 sent to skilled nursing facilities; 1,725 died (see Figure 1, this page). These patients were 73 percent male, on average 41.5 years of age, had an average hospital length of stay of 10.1 days, an intensive care unit length of stay of 12.6 days, an average injury severity score of 16.9, and were on the ventilator for...
an average of 11.3 days. The most frequent location of the fire was home (84.1 percent) with industry (4.5 percent) and recreation (4.4 percent) a distant second and third. (See Figure 2, this page.)

**Protecting your home**
Where’s the fire? Odds are it will be at home. If a fire starts in your home, you may have only two minutes to escape. The best way to protect yourself and your home is to find and remove fire hazards. Most (60 percent) house fire deaths occur in homes that lack working smoke detectors. Install smoke alarms on every level of your home, inside bedrooms, and outside sleeping areas. Test your smoke detectors and change the batteries regularly.

If a fire occurs in your home, get out, stay out, and call for help. For more prevention tips, visit the American Red Cross website at www.redcross.org/prepare/disaster/home-fire.

Throughout the year, we will be highlighting NTDB data through brief reports published monthly in the Bulletin. The NTDB Annual Report 2014 is available as a PDF file at www.facs.org/quality-programs/trauma/ntdb/docpub. In addition, this website contains information about how to obtain NTDB data for more detailed study. If you are interested in submitting your trauma center’s data, contact Melanie L. Neal, Manager, NTDB, at mneal@facs.org.

**Acknowledgement**
Statistical support for this article has been provided by Chrystal Caden-Price, Data Analyst, NTDB.

**REFERENCES**

Social media use at the American College of Surgeons (ACS) has come a long way in the past four years. In addition to using public platforms such as Facebook, Twitter, LinkedIn, and YouTube to get its message out, the College launched ACS Communities last summer so that members can now interact with the College and each other both publicly and privately.

TABLE 1. ACS SOCIAL MEDIA GROUPS

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Social media use at the American College of Surgeons (ACS) has come a long way in the past four years. In addition to using public platforms such as Facebook, Twitter, LinkedIn, and YouTube to get its message out, the College launched ACS Communities last summer so that members can now interact with the College and each other both publicly and privately.

Public-facing social media

Of the more than 10,000 people who have “liked” the College’s Facebook page, 63 percent are men and 37 percent are women. More than 3,300 of the College’s followers live in the U.S.; the next biggest countries in terms of people who like the College’s Facebook page are Egypt (826), Mexico (813), Pakistan (562), and Brazil (555). The cities with the most followers are Cairo, Egypt (367); Mexico City, Mexico (301); and Lahore, Pakistan (210). At press time, the College’s most engaging post—one that featured
100 reasons to join the College—reached more than 90,000 people, and more than 1,900 people liked, shared, or commented on that posting. (See Table 1, page 58.)

Twitter, however, remains the College’s most active social media outlet, especially during the College’s annual Clinical Congress. At last year’s conference, the official event hashtag, #ACSCC14, received more than 13 million impressions, surpassing the previous year by more than 3 million impressions.*

Conference presenters and attendees tweeted announcements of upcoming presentations and room locations, as well as personal observations regarding upcoming sessions. Many attendees tweeted live

*“Impressions” is a metric for how many times a hashtag appears in users’ tweet streams. Total impressions are computed by multiplying the number of tweets per participant by the number of followers that participant currently has. This computation is done for all participants in a specific time period and then the numbers are added up.
quotes and comments from the presentations, particularly about controversial and stimulating topics. In terms of year-round Twitter use, the College’s social media team receives more tweet requests from staff than ever, as ACS employees have increasingly come to view Twitter as a way to get their messages out more quickly to the nearly 20,000 people and organizations that follow the College.

The College also uses YouTube, LinkedIn, and Google+ with greater frequency. On LinkedIn, the College posts videos of staff members on its careers page to let job seekers know firsthand what it’s like to work at the College. In early 2015, the College began using promoted posts on LinkedIn, Facebook, and Twitter to tout the many reasons why becoming a member of the ACS benefits a surgical career. (See Figure 1, page 59.)

ACS Communities
ACS Communities, the College’s state-of-the-art online community platform, launched in July 2014, when its first community became available to members. As of February 2015, the platform had grown to 92 communities covering a variety of member surgeon interest areas. Of these, 51 communities are open, meaning that any member of the College may join. (Closed communities exist primarily to provide online work forums for ACS leadership groups, such as the Board of Governors and the Advisory Councils.) ACS Governor Tyler Hughes, MD, FACS, serves as the Medical Editor of ACS Communities.

The number of surgeons who use ACS Communities has increased, as well. In terms of website pages viewed, number of items recommended by visitors, and unique contributors, January was the biggest month yet for the platform. The site has already received more than 560,000 pages views since the first community launched.

The substantial number of posts by busy practicing surgeons and leaders of the College indicates that members have much to discuss with each other. Topics vary from case discussions to Maintenance of Certification to electronic medical records to issues regarding the everyday practice of surgery. Recent hot topics include physician burnout (multiple communities), contract negotiation (Young Fellows), axillary dissection (Breast Surgery), career detours (Women Surgeons), centers of excellence and redo for anastomotic stricture (Colon and Rectal Surgery), and when to operate for chronic abdominal pain (Rural Surgery).

To search for information on any topic, simply log in to ACS Communities and use the search box on the home page. Results can be sorted alphabetically, by date, or by relevance.
As an example of how ACS Communities may harness the power of the collective intelligence among members of the College, the Colon and Rectal Surgery community features “Ask the Expert” online discussions, hosted by administrators Scott Steele, MD, FACS, and Joshua Bleier, MD, FACS. These scheduled discussions have included experts on such topics as management of complicated colonic disease, surgical approaches to colon cancer, coding, hereditary colorectal cancer syndromes, and what to do when complications occur. Participants adjust their settings to receive real-time messages during the discussions so that it becomes an online chat, after which they can return settings to receive daily digests if they prefer. Those who are unable to participate live can view transcripts posted in the community’s resource library, where videos, articles, and other useful information also may be found. (See Tables 2–3, page 60, and Figures 2–4, pages 59 and 61.)

ACS Communities, which can be accessed through the facs.org home page or directly by visiting acscommunities.facs.org, provides an environment in which ACS members can not only connect, engage, and share critical information and best practices in real time, but also ask for advice, share experiences, exchange photos and videos, and build professional relationships. ♦
Based on current available evidence, clinical practice guidelines, and consensus recommendations from experienced surgeons, these “point-of-care” modules address diagnoses and conditions most relevant to general surgeons. The modules are available online through any mobile device and can be used for decision support, patient-focused interactions with other health care professionals, and to provide patient education.

**Topics covered in the five new modules include:**

- Antibiotic Prophylaxis for Gastrointestinal Endoscopy
- Breast Cancer during Pregnancy
- Inflammatory Breast Cancer
- Non-Invasive Breast Cancer
- Postoperative Delirium in Older Adults

**Use your ACS login information for **
**FREE ACCESS** to these new EBDS modules.

Visit: [www.ebds.facs.org](http://www.ebds.facs.org)
E-mail: ebds@facs.org
Phone: 312-202-5568
Health care leaders participate in ACS Quality Forum in Sacramento, CA

A panel of health care leaders and policymakers gathered on January 16 for the American College of Surgeons (ACS) Surgical Health Care Quality Forum Sacramento, CA, the 21st such meeting in a series of community forums held throughout the U.S. since 2011. Participants discussed the state of health care in Northern California and highlighted ways that health leaders and government officials can collaborate to improve patient outcomes and the quality of the health care system. Forum presenters shared their views on policy recommendations, hospital and health system initiatives, physician satisfaction issues, and the role of the ACS National Surgical Quality Improvement Program in measuring and improving patient care. Panelists discussed examples of state and national quality improvement initiatives that have resulted in higher standards, reduced costs, and better outcomes.

Julie A. Freischlag, MD, FACS, vice-chancellor for human health sciences and dean of the School of Medicine, University of California (UC) Davis Health System, and Immediate Past-Chair of the ACS Board of Regents; and David H. Wisner, MD, FACS, professor of surgery, UC Davis School of Medicine, co-moderated the forum. In keynote speeches, U.S. congressional Reps. Ami Bera, MD (D-CA), and Doris Matsui (D-CA) discussed health care in California, the status of the Affordable Care Act, the key drivers in the state and nationally for health care quality improvement, and how surgeons and other health care providers can most effectively inform legislators of important health issues.

Forum panelists included:

• Ronald W. Chapman, MD, MPH, Director and State Health Officer, California Department of Public Health
• David B. Hoyt, MD, FACS, Executive Director, ACS
• Diana L. Farmer, MD, FACS, FRCSE, Pearl Stamps Stewart Professor and Chair; chair, department of surgery, UC Davis School of Medicine; surgeon-in-chief, UC Davis Children’s Hospital, UC Davis Health System, and member, ACS Board of Governors Executive Committee
• Mark P. Owens, MD, FACS, vice-president of medical affairs, Mercy San Juan Medical Center, Dignity Health
• Glenn S. Tse, MD, general surgeon, Kaiser Roseville Medical Center; senior partner, The Permanente Medical Group
• Heather M. Young, PhD, RN, FAAN, associate vice-chancellor for nursing, dean and professor, Betty Irene Moore School of Nursing, UC Davis

View the full program video at www.facs.org/quality-programs/about/inspiring-quality/tour/sacramento. For more information, e-mail InspiringQualityTour@facs.org.

APR 2015 BULLETIN American College of Surgeons
Study: Readmissions due to post-discharge complications

According to a study recently published in the Journal of the American Medical Association (JAMA), readmissions in the first 30 days after surgery were associated with new post-discharge complications related to the surgical procedure and not to a worsening or mismanagement of conditions the patient already had while hospitalized for surgery.

As a Clinical Scholar at the American College of Surgeons (ACS), Ryan P. Merkow, MD, MS, and colleagues examined the reasons, timing, and factors associated with unplanned postoperative hospital readmissions within 30 days after surgery. The study reviewed data from patients undergoing surgery at hospitals participating in the ACS National Surgical Quality Improvement Program (ACS NSQIP®), January through December 2012. Readmission rates and reasons were assessed for all surgical procedures and for six representative operations: bariatric procedures, colectomy or proctectomy, hysterectomy, total hip or knee arthroplasty, ventral hernia repair, and lower extremity vascular bypass.

Readmission as a quality and cost-containment metric is a major issue for hospitals, clinicians, and policymakers. Financial penalties for readmission have been expanded beyond medical conditions to include surgical procedures. Understanding the causes of readmissions could help direct future surgical quality improvement efforts and policy decisions designed to reduce surgical readmission rates.

The unplanned 30-day readmission rate for 498,875 operations was 5.7 percent. For the individual procedures, the rate of readmission ranged from 3.8 percent after hysterectomy to 14.9 percent after lower extremity vascular bypass. The most common reason for unplanned readmission was surgical site infection (19.5 percent), ranging from 11.4 percent after bariatric surgery to 36.4 percent after lower extremity vascular bypass.

Co-authors of the study, which has received prominent media coverage, include Karl Y. Bilimoria, MD, MS, FACS, ACS Faculty Scholar and director, Surgical Outcomes and Quality Improvement Center, Northwestern University, Chicago, IL; and Clifford Y. Ko, MD, MS, MSHS, FACS, Director of ACS NSQIP and the Division of Research and Optimal Patient Care. View the study in JAMA at jama.jamanetwork.com/article.aspx?articleid=2107788.

“Your Lung Operation” provides patients with the knowledge and training to support full participation and optimal recovery. Safety measures such as site marking, ID band checks, and pneumonia prevention strategies are demonstrated to support the surgeon and health care professional in meeting all CMS and Joint Commission guidelines for safe surgery and optimal recovery.

The program is free to members and contains:

- A 20-page booklet and 30-minute DVD with information on preoperative prep, cancer staging, procedure overview, potential risks, discharge, and home care.
- Information sheets, including lung images, medication lists, exercise and pulmonary rehab activity guides, quit smoking resources, and survivorship plan.
- Additional resources, including a patient evaluation form.
- For nonmembers, this program can be purchased individually or bulk pricing is available.
- Hospital broadcast rights also available for purchase.

To order, visit www.SurgicalPatientEducation.facs.org.
Apply now for ACS Surgeons as Leaders course in June

The American College of Surgeons (ACS) Surgeons as Leaders: From Operating Room to Boardroom course will take place June 7–10, at the ACS headquarters in Chicago, IL. The application deadline is April 8. Surgeons who aspire to meet the challenges of exemplary leadership across all settings are encouraged to join senior surgical leaders in the three-day course.

Faculty will include Course Chair Carlos A. Pellegrini, MD, FACS, FRCSI(Hon), ACS Immediate Past-President; Karen E. Deveney, MD, FACS; Julie A. Freischlag, MD, FACS, Immediate Past-Chair, ACS Board of Regents; Larry R. Kaiser, MD, FACS; Fabrizio Michelassi, MD, FACS, Chair, ACS Board of Governors; Nathaniel J. Soper, MD, FACS; and Beth H. Sutton, MD, FACS, ACS Regent. Keynote presentations will be given by Andrew L. Warshaw, MD, FACS, ACS President; L. D. Britt, MD, MPH, DSc(Hon), FACS, FCCM, FRCS(Eng)(Hon), FRCS(Ed)(Hon), FWACS(Hon) FRCSI(Hon), FSc(SA)(Hon), FRCS(Glasg)(Hon), ACS Past-President; and John W. Kenagy, MD, MPA, ScD, FACS.

Organized by the ACS Division of Education, the course will help surgeons exhibit leadership attributes; use consensus development and vision to set, align, and achieve goals; build and maintain effective teams; identify personal hidden contexts that hamper the ability to lead; change culture, resolve conflict, and balance demands within the larger environment; and translate the principles of leadership into action. See the sidebar at right for application information.

ACS Comprehensive General Surgery Review Course starts July 30

The American College of Surgeons (ACS) Comprehensive General Surgery Review Course will take place July 30–August 2 in Chicago, IL. The intensive three-and-a-half-day review course will cover essential content areas in general surgery, including abdomen, alimentary tract, endocrine, oncology, perioperative care, skin and breast, surgical critical care, trauma, and vascular operations. Course Chair John A. Weigelt, MD, DVM, FACS, and a distinguished faculty will use didactic and case-based formats to present a comprehensive and practical review. Dr. Weigelt is Medical Director of the ACS Surgical Education and Self-Assessment Program (SESAP®), professor of surgery and chief, division of trauma and critical care, and associate dean of clinical quality, Medical College of Wisconsin, Milwaukee.

The course will feature a variety of self-assessment materials, as well as five monthly online modules following the course. Organized by the ACS Division of Education, this course will help fulfill the requirements for Maintenance of Certification, Part 2, and should be helpful to surgeons preparing for recertification examinations. Self-assessment is available. Space is limited and registration will be accepted on a first-come, first-served basis. See the sidebar at right for registration information. The ACS designates this live activity for a maximum of 30 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
The ACS welcomes Jordan Chapter
Fellows in the country of Jordan have formed the newest chapter of the American College of Surgeons (ACS). The Board of Regents on February 6 unanimously approved the establishment of the Jordan Chapter, the 107th chapter of the College. With this addition, the College now has 40 international and 67 domestic chapters, with two others in various stages of formation. The newly elected officers of the Jordan Chapter are as follows: Mahmoud M. Abu-Khalaf, MB, BCh, FACS, President; Khaled Yousef Al Sawair Ajarma, MD, FACS, Vice-President; Osama M. Hamed, MB, BS, FACS, Secretary; Abdul Naser M. Al Shunigat, MB, BS, FACS, Treasurer; Mohammad Abdel F. Al Shubaki, MB, BS, FACS, Chapter Councilor; Muhammad Abdel Wahab Al-Zetawi, MB, BS, FACS, Chapter Councilor; and Zaki Mahdi Qulaghassi, MB, BCh, FACS, Chapter Councilor.

Chapter hosts reception for young surgeons at Philadelphia Museum of Art
On the evening of November 21, the ACS Metropolitan Philadelphia Chapter hosted its first Residents Reception in the halls of the historic Philadelphia Museum of Art, PA. The nearly 30 young surgeons in attendance, along with other guests and chapter officers, enjoyed a lively conversation in the unique venue. Attendees received information about College and chapter membership and ACS programs. The Metropolitan Philadelphia Chapter is planning to host another special resident event in the near future. To encourage the participation of young surgeons, the chapter also offers resident surgeons an opportunity to participate every fall in the chapter's annual mock-oral examination.

ACS International Governors and Chapter Officers meet at 2014 Clinical Congress
More than 50 ACS International Governors and Chapter Officers met for two hours during Clinical Congress 2014 to discuss the growth of ACS international membership and issues of concern to the ACS.
Satish K. Shukla, MS, FICS, president of the Association of Surgeons of India (left), presents an award to the keynote speaker, Dr. Warshaw. Next on the right in the background is Tamonas Choudhary, BS, MS, FMAS; and in front, Suresh Chandra Hir, MB, BS, MS, immediate past-president of the Association of Surgeons of India.

international community. The meeting was organized by the officers of the Governors Chapter Activities International Workgroup, Raymond R. Price, MD, FACS, Chair, and Jamal J. Hoballah, MD, MBA, FACS, Vice-Chair. Also in attendance at the meeting were Andrew L. Warshaw, MD, FACS, ACS President; Carlos A. Pellegrini, MD, FACS, FRCSI(Hon), ACS Immediate Past-President; David B. Hoyt, MD, FACS, ACS Executive Director; Gary L. Timmerman, MD, FACS, Past-Chair, Board of Governors Executive Committee; Patricia L. Turner, MD, FACS, Director, ACS Division of Member Services; Donna Tieberg, ACS Chapter Services Manager; and Kate Early, Administrator, ACS International Relations Committee. Of particular interest to attendees was the development of international “Regional Meetings,” which would create larger conferences or congresses, possibly along with other surgical societies, to offer opportunities for a wider range of educational sessions and to facilitate dialogue among surgeons of different countries.

Also at Clinical Congress 2014, International Governors and Chapter Presidents met separately by region, along with an appointed secretary for each group, who offered an agenda and facilitated the separate discussions of Governors and Chapter Presidents in each of the four international regions.

ACS President speaks at 2014 ASICOM meeting in Hyderabad, India
ACS President Andrew L. Warshaw, MD, FACS, FRCSEd(Hon) offered a well-received keynote presentation at the 2014 Association of Surgeons of India 74th Annual Conference on December 27. Dr. Warshaw’s lecture was titled Appropriate Decisions for Surgical Care. The event took place at the Hyderabad International Convention Centre in the historic city of Hyderabad, India, capital of the southern Indian state of Telangana. Several Fellows also attended this international symposium, which focused on collaborative teaching and learning.

Hong Kong Chapter members and local university surgeons welcome Dr. Warshaw
On December 5, 2014, Dr. Warshaw visited Queen Mary Hospital at the University of Hong Kong (HKU), SAR China, and delivered a lecture titled Current Observations on Intraductal Papillary Mucinous Neoplasm of the Pancreas. Members of the Hong Kong Chapter, along with HKU staff, attended the event. Before the lecture, the ACS Governor for Hong Kong, Chung Mau Lo, MD, FACS, head, department of surgery, Queen Mary Hospital, HKU, along with chapter officers, local surgeons, and hospital staff welcomed Dr. Warshaw at a reception.
Indiana Chapter advocates at “Day at the Capitol”

The Indiana Chapter of the ACS held its Day at the Capitol event January 26 in Indianapolis. The one-day meeting, coordinated by the Chair of the ACS Legislative Committee, Don J. Selzer, MD, FACS, consisted of a half-day of didactics followed by a half-day at the Indiana Statehouse, advocating on behalf of Indiana’s patients and College Fellows. This was the fifth annual advocacy event for the Indiana Chapter, which again benefited from the support of the ACS Chapter Lobby Day Grant Program.

The morning session included a summary of the Indiana legislative process, current medical legislative issues in the Indiana General Assembly, health care financing, an update on value-based purchasing and the Centers for Medicare & Medicaid Services’ Physician Quality Reporting System, and a discussion of the importance of surgeon advocacy. Tara Leystra Ackerman, MPH, State Affairs Associate, ACS Division of Advocacy and Health Policy, provided a summary of recent advocacy efforts at the state level and emphasized areas of importance in the 2015–2016
Attendees at the South Florida Chapter meeting included, from left: Bill Bouck, South Florida Chapter Administrator; a medical student from Mount Sinai Medical Center, Miami Beach, FL; Dr. Paramo; Dr. Armstrong; and Raul Rosenthal, MD, FACS, Chapter Secretary/Treasurer.

legislative cycle. Keynote speaker, Indiana State Rep. Timothy Brown, MD (R), presented a summary of how physicians continue to play a role in Indiana’s political and regulatory processes.

Among the 25 participants who braved frigid temperatures to visit the Indiana Statehouse for the 2014 Day at the Capitol were: Indiana Chapter President William Nowlin, MD, FACS; Chapter Past-President Scott G. Thomas, MD, FACS; ACS Governor and Past-President, David Welsh, MD, FACS; and ACS Governor David F. Canal, MD, FACS. While at the statehouse, several surgeon advocates met with legislators from their home districts, including those who hold key positions on insurance, health care, and finance committees. Advocates focused most of their efforts on educating legislators about the potential impact of S.B. 55, a bill anticipated to create a 1,200 percent increase in the number of liability claims involving Indiana’s Medical Malpractice Act physician panel review process.

Dr. Armstrong helps South Florida Chapter members to navigate health care issues

The South Florida Chapter held its 2015 annual dinner and meeting Monday, January 26, at the Hyatt Regency Resort & Marina in Fort Lauderdale. Chapter President Juan C. Paramo, MD, FACS, FICS, offered opening remarks and facilitated the chapter business meeting, with 94 individuals in attendance. John H. Armstrong, MD, FACS, Florida Surgeon General and Secretary of Health, was the keynote speaker, offering a well-received presentation on Navigating Health with a Surgeon’s Compass.

2015 Leadership Summit to include presentations on transforming leadership

The fourth annual Leadership & Advocacy Summit will take place April 18–21 at the JW Marriott in Washington, DC. The leadership portion of the dual summit, April 18–19, will focus on leading with influence. Session topics will include overcoming resistance to change, moving from transactional to transformational leadership, conquering physician burnout and building resiliency, and gaining a better understanding of physician employment contracts. As with previous leadership summits, several ACS chapters will share their success stories from the previous year. Again this year, attendees will convene in small groups by state/region to identify areas for synergy and unified efforts. For more information on the leadership summit, contact Donna Tieberg, ACS Chapter Services Manager, at dtieberg@facs.org. ♦
Dr. Sachdeva delivers Bruce E. Spivey, MD, lecture at AAO meeting

Ajit K. Sachdeva, MD, FACS, FRCS, Director of the American College of Surgeons (ACS) Division of Education, delivered the Bruce E. Spivey, MD, Lecture in Risk Management and Patient Safety to a capacity crowd at the 2014 annual meeting of the American Academy of Ophthalmology (AAO) in Chicago, IL. In his presentation, titled Transitions, Vulnerabilities, and Patient Safety, Dr. Sachdeva highlighted unique opportunities to improve patient safety and quality of care through innovative education and training. He emphasized the need to focus on the many transitions during the professional careers of surgeons, as well as transitions in patient care.

This annual lectureship honors Dr. Spivey, a Fellow of the ACS and an internationally renowned ophthalmologist and surgical educator. Dr. Spivey has served in key leadership roles in his career, including as chief executive officer (CEO) of several major health care systems and president of key professional societies; from 1976–1992, he served as founding executive vice-president and CEO of the AAO. The AAO is an umbrella organization that provides leadership and continuing education to the ophthalmologic profession.

In his ACS role, Dr. Sachdeva is responsible for the development and implementation of innovative educational programs for surgeons, surgery residents, medical students, and members of surgical teams. He has introduced many innovations in surgical education and training, and is an internationally recognized leader in this field.

TTP Program positions still available for 2015–2016 academic year

Several institutions participating in the American College of Surgeons (ACS) Transition to Practice (TTP) Program still have TTP Associate positions available for the 2015–2016 academic year. Interested residents and recent residency graduates are encouraged to review the program profiles on the ACS TTP website at www.facs.org/education/program/ttp and submit their curriculum vitae to ttp@facs.org with a list of institutions to which they have an interest in applying.

The ACS Division of Education launched the TTP Program in 2013 in response to the identified need for additional surgical training for general surgeons leaving residency. The program is intended to bridge the gap between residency and independent practice. TTP Associates experience increasing autonomy throughout the year in a broad-based clinical setting, build their competence and confidence in general surgery, develop practice management skills, and gain practical experience for the next phase of their careers. Working closely with experienced surgeons, TTP Associates have the ability to concentrate on specific areas within general surgery to refine operative skills based on their career goals.
Proudly display that you’re a Fellow of the American College of Surgeons

As a Fellow, you are dedicated to improving the care of surgical patients. You have pledged to place the welfare and rights of your patients above all else, to respect each patient’s autonomy and individuality, and to advance your knowledge and skills throughout your career.

Share these commitments with your patients by displaying the Fellowship Pledge poster in your waiting room, exam room, or office.

Visit http://bit.ly/1EkGKSh to purchase or download a poster today.
The American College of Surgeons (ACS) Division of Education has announced that it is offering two new fellowships: one in conjunction with the MacLean Center for Clinical Medical Ethics at the University of Chicago, IL, and the other with the department of surgery at the University of Wisconsin (UW), Madison. Application materials for both awards are due April 30, 2015.

ACS-MacLean Center Surgical Ethics Fellowship
The ACS Division of Education and the MacLean Center for Clinical Medical Ethics at the University of Chicago have announced the availability of a new fellowship program in surgical ethics, starting in July 2015. The program will prepare surgeons for careers that combine clinical surgery with scholarly studies in surgical ethics. The fellowship will encompass research, teaching, and clinical ethics consultations, and will include bimonthly surgical ethics case conferences, participation in the surgical ethics curriculum, and mentored research in surgical ethics.

The program begins with a five-week, full-time course in Chicago in July and August. From September 2015 to June 2016, fellows will meet each Wednesday for a structured ethics curriculum including clinical ethics, law and ethics, and moral philosophy and research-in-progress seminars. In addition, fellows will participate in an ethics consultation service and, working with faculty mentors in surgery, each fellow will complete a research project.

Support will be provided for each of two fellows. For additional information, contact Patrice Gabler Blair, MPH, Associate Director, ACS Division of Education, at pblair@facs.org.

ACS-UW Fellowship in Surgical Education Research
The ACS Division of Education and the UW department of surgery have developed a new surgical education research fellowship for residents. The fellowship will allow surgery residents who have completed two or three years of postgraduate training to obtain the specialized knowledge, skills, and training needed to become leaders in the field of surgical education.

During the two-year commitment, fellows may attend UW School of Education courses in areas such as study design, communication of research findings, scientific writing, research knowledge specific to the primary field of study, and broad research in surgical education, ethics, and grant writing. Under the direction of expert faculty mentors from the ACS Division of Education, UW department of surgery, and UW School of Education, fellows will complete a mentored surgical education research project tailored to their interests.

The award provides two years of funding from the UW department of surgery and is available in July 2015. For additional information, contact Mara Snyder, MA, general surgery residency program manager, department of surgery, University of Wisconsin School of Medicine and Public Health, at snyder@surgery.wisc.edu.
RAS-ACS announces winners of Leadership Scholarship Awards

The Resident and Associate Society of the American College of Surgeons (RAS-ACS) recently announced the winners of the RAS-ACS Leadership Scholarship Awards, which fund attendance at an ACS meeting. The award recipients are as follows:

• **Lindsay Kuo, MD**, postgraduate year (PGY)-5 surgery resident, department of surgery, resident executive council chair research fellow, Center for Surgery and Health Economics, Hospital of the University of Pennsylvania, and master of business administration candidate 2015, The Wharton School of Business, University of Pennsylvania, Philadelphia. Dr. Kuo attended the ACS Residents as Teachers and Leaders Course in March.

• **Adeyemi A. Ogunleye, MB, BS**, PGY-5 surgery resident, Harlem Hospital Center Program, New York, NY, will attend the ACS Leadership & Advocacy Summit, April 18–21, 2015, in Washington, DC.

• **Vance Albaugh, MD, PhD**, PGY-3 general surgery resident, Vanderbilt University Medical Center, Nashville, TN, will attend the ACS Clinical Trials Course, December 6–10.

To be considered for the scholarship awards, residents submitted applications, an essay, a curriculum vitae, and letters of recommendation. The scholarship recipients were selected based on four criteria: prior RAS-ACS involvement, potential for future leadership within RAS-ACS, the strength of their letters of support, and their essays’ support of the RAS-ACS vision. The Jeannette and H. Peter Kriendler Charitable Trust supports the scholarship fund.

For more information about the RAS-ACS, go to www.facs.org/member-services/ras/leadership.

The scholarship recipients were selected based on four criteria: prior RAS-ACS involvement, potential for future leadership within RAS-ACS, the strength of their letters of support, and their essays’ support of the RAS-ACS vision.
Applications for ACS/Triological Society Award due May 15

The American College of Surgeons (ACS) and the Triological Society have announced a competitive grant program to provide supplemental funding to otolaryngologists-head and neck surgeons who have received a new National Institutes of Health Mentored Clinical Scientist Development Award (K08/K23) or who have an existing award with a minimum of three years remaining in the funding period as of June 1. The application deadline is May 15, 2015.

This award is being offered as a means of facilitating the research career development of otolaryngologists-head and neck surgeons, with the expectation that the awardee will have sufficient pilot data to submit a competitive R01 proposal prior to the conclusion of the K award period.

This award provides financial support in the amount of $80,000 per year for up to five years or for the remainder of the term of existing grants to supplement the K08/K23 awards. Funding is dependent upon receipt of meritorious application. For further details, visit the Triological Society’s website at www.triological.org/researchgrants.html. For additional information, contact info@triological.org.

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**SCHOLARSHIPS**
Calendar of events

*Dates and locations subject to change. For more information on College events, visit www.facs.org/events or http://web2.facs.org/ChapterMeetings.cfm

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**APRIL**

**Japan Chapter**
April 16
Nagoya, Japan
Contact: Katsuhiko Yanaga, kyanaga@jikei.ac.jp

**Indiana Chapter**
April 17–18
Indianapolis, IN
Contact: Carolyn Downing, cdowning@ismanet.org, www.infacs.org

**ACS Leadership & Advocacy Summit**
April 18–21
Washington, DC
Contact: Donna Tieberg, dtieberg@facs.org, www.facs.org/advocacy/participate/summit

**Chile Chapter**
April 19–22
Valparaiso, Chile
Contact: Celia Aldana, presidente@acschile.cl, www.acschile.cl

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**2015 Surgical Education Week**
Association of Program Directors in Surgery/Association for Surgical Education
April 21–25
Seattle, WA
Contact: Krashina Hudson, khudson@facs.org, http://bit.ly/1FM7Dxr

**Innovation and Controversies: Montreal Colorectal Symposium**
April 29–30
Centre Mont-Royal, Montreal, QC
Contact: Dr. Carol-Ann Vasilevsky, carol-ann.vasilevsky@mcgill.ca, www.montrealcolorectalsymposium.com

**Egypt Chapter**
April 29–May 2
Cairo, Egypt
Contact: Mohey Elbanna, moheyelbanna@yahoo.com, www.egyptacs.net

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**MAY**

**Minnesota Surgical Society—a Chapter of the ACS**
May 1
Minneapolis, MN
Contact: Janna Pecquet, janna@mnusurgicalsociety.org, www.mnsurgicalsociety.org

**North Dakota Chapter & South Dakota Chapter**
May 1–2
West Fargo, ND
Contact: Terry Marks, tmarks@sdmsa.org

**Virginia Chapter**
May 1–3
Richmond, VA
Contact: Susan McConnell, smconnell@ramdocs.org, www.virginiaacs.org

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**West Virginia Chapter**
May 7–9
Sulphur Springs, WV
Contact: Sharon Bartholomew, sbartholomew@hsc.wvu.edu

**Ohio Chapter**
May 8–9
Dayton, OH
Contact: Jennifer Starkey, ocacs@ohiofacs.org, www.ohiofacs.org

**Michigan Chapter**
May 13–15
East Lansing, MI
Contact: Angela Kemppainen, akemppainen@msms.org, www.michiganacs.org

**Northern California Chapter**
May 16
Monterey, CA
Contact: Christina McDevitt, nccacs@att.net, www.nccacs.org

**Metropolitan Philadelphia Chapter**
May 18
Philadelphia, PA
Contact: Maria Elias, melias@pamedsoc.org, www.metrophilasurgeons.org

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<table>
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<tr>
<th>Chapter</th>
<th>May 21</th>
<th>Burlington, VT</th>
<th>Contact: Jeanne Kunkle, <a href="mailto:Jeanne.kunkle@uvmhealth.org">Jeanne.kunkle@uvmhealth.org</a></th>
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<tr>
<td><strong>Florida Chapter</strong></td>
<td>May 22–23</td>
<td>Gainesville, FL</td>
<td>Contact: Jennifer Starkey, <a href="mailto:jennifer@executive-office.org">jennifer@executive-office.org</a>, <a href="http://www.floridaacs.org">www.floridaacs.org</a></td>
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<tr>
<td><strong>Jamaica Chapter</strong></td>
<td>May 23–24</td>
<td>Kingston, Jamaica</td>
<td>Contact: David Hunter, <a href="mailto:davhunter@hotmail.com">davhunter@hotmail.com</a></td>
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<tr>
<td><strong>Mexico Federal District Chapter</strong></td>
<td>May 29–30</td>
<td>Sonora, Mexico</td>
<td>Contact: Rosa Aurora Ruiseco, <a href="mailto:colegioamericanodecirujanos@yahoo.com.mx">colegioamericanodecirujanos@yahoo.com.mx</a></td>
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<tr>
<td><strong>Maine Chapter &amp; New Hampshire Chapter</strong></td>
<td>May 29–31</td>
<td>Bar Harbor, ME</td>
<td>Contact: Jennifer Starkey, <a href="mailto:jennifer@acschapters.org">jennifer@acschapters.org</a>, <a href="http://www.maineacs.org">www.maineacs.org</a> and <a href="http://www.nhacs.org">www.nhacs.org</a></td>
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<tr>
<td><strong>Missouri Chapter</strong></td>
<td>May 29–31</td>
<td>Lake Ozark, MO</td>
<td>Contact: John Kirby, <a href="mailto:kirbyj@wudosis.wustl.edu">kirbyj@wudosis.wustl.edu</a>, <a href="http://www.moacs.org">www.moacs.org</a></td>
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<tr>
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<td>May 29</td>
<td>Joplin, MO</td>
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<td><strong>Northeast Mexico Chapter</strong></td>
<td>June 11–13</td>
<td>Nuevo León, Mexico</td>
<td>Contact: Raul Lozano-Quiroga, <a href="mailto:facsnoreste@gmail.com">facsnoreste@gmail.com</a></td>
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<td><strong>Illinois Chapter</strong></td>
<td>June 18–21</td>
<td>Peoria, IL</td>
<td>Contact: Luann White, <a href="mailto:lhwhite26@gmail.com">lhwhite26@gmail.com</a>, <a href="http://www.ilchapteracs.org">www.ilchapteracs.org</a></td>
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<td><strong>June</strong></td>
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<td><strong>Austria-Hungary Chapter</strong></td>
<td>June 3–5</td>
<td>Linz, Austria</td>
<td>Contact: Albert Tuchmann, <a href="mailto:albert.tuchmann@wienkav.at">albert.tuchmann@wienkav.at</a></td>
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<tr>
<td><strong>Brooklyn-Long Island Chapter</strong></td>
<td>June 9</td>
<td>Garden City, NY</td>
<td>Contact: Teresa Barzyz, <a href="mailto:acsteresa@aol.com">acsteresa@aol.com</a>, <a href="http://www.bliacs.org">www.bliacs.org</a></td>
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<tr>
<td><strong>Washington Chapter &amp; Oregon Chapter</strong></td>
<td>June 11–14</td>
<td>Cle Elum, WA</td>
<td>Contact: Harvey Gail, <a href="mailto:harvey@spiremanagement.com">harvey@spiremanagement.com</a>, <a href="http://www.wachapteracs.org">www.wachapteracs.org</a> and <a href="http://www.oregonchapteracs.org">www.oregonchapteracs.org</a></td>
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**FUTURE CLINICAL CONGRESSES**

- **2015**
  - October 4–8
  - Chicago, IL

- **2016**
  - October 16–20
  - Washington, DC

- **2017**
  - October 22–26
  - San Diego, CA

*Dates and locations subject to change. For more information on College events, visit www.facs.org/events or http://web2.facs.org/ChapterMeetings.cfm*