Generations of surgeons: Honoring and modernizing tradition
## Features

### Cover Stories: ACS Resident and Associate Society:

- **Generations of surgeons: Honoring and modernizing tradition**
  - Maya Babu, MD, MBA
  - Page 11
- **Surgery comes of age: The ACS and the evolution of the surgical profession**
  - Hillman Terzian, MD; Raphael Sun, MD; Heidi Hon, MD; Priya Jadeja, MD; and Scott B. Grant, MD, MBE
  - Page 13
- **Talking through time: Trends in communication and the evolving patient-physician relationship**
  - Edward S. Shipper, MD; John C. Hardaway, MD, PhD; Erin M. Garvey, MD; and Heather Logghe, MD
  - Page 19
- **“Pimping”: Time-honored educational tradition or relic of the past?**
  - Jessica R. Burgess, MD; Elizabeth Bailey, MD, MsEd; Kristin M. Busch, MD; Rebecca L. Hoffman, MD, MSCE; and Luke V. Selby, MD, MS
  - Page 24
- **The ACS and advocacy: A tradition of protecting our patients and advancing our profession**
  - Kevin Koo, MD, MPH, MPhil; Naveen F. Sangji, MD, MPH; SreyRam Kuy, MD, MHS; and Adeyemi A. Ogunleye, MD, SM
  - Page 30
- **Technology for teaching: New tools for 21st century surgeons**
  - Mariam F. Eskander, MD, MPH; Madalyn G. Neuwirth, MD; SreyRam Kuy, MD, MHS; Hari B. Keshava, MD, MS; and Jonathan P. Meizoso, MD, MSPH
  - Page 36
- **Exploring the limits of surgeon disclosure: Where are the boundaries?**
  - Rashna F. Ginwalla, MD, MPH; Alisha D. Reiss, MD; Naveen F. Sangji, MD, MPH; Anne P. Ehlers, MD, MPH; and William H. Ward, MD
  - Page 43
<table>
<thead>
<tr>
<th>Contents continued</th>
</tr>
</thead>
</table>

### STATEMENT

- **Statement on physician-led team-based surgical care**

### COLUMNS

- **Looking forward**
  - David B. Hoyt, MD, FACS

- **What surgeons should know about...**
  - Understanding Medicare Part B incident to billing
  - Neha Agrawal

- **From residency to retirement:**
  - Surgery in Maryland: Guidelines for navigating health care reform
  - Mark R. Katlic, MD, FACS

- **ACS Clinical Research Program:**
  - Two studies pave the way for preoperative therapy in pancreatic cancer patients
  - Matthew H. G. Katz, MD, FACS; Syed A. Ahmad, MD, FACS; and Judy C. Boughey, MD, FACS

- **MHS: Supporting the future:**
  - Amilu Stewart, MD, FACS: Silencing the skeptics
  - Sarah B. Klein, MPA

- **A look at The Joint Commission:**
  - New Patient Blood Management Certification aimed at eliminating unnecessary transfusions
  - Carlos A. Pellegrini, MD, FACS, FRCSI(Hon), FRCS(Hon), FRCSEd(Hon)

- **NTDB data points:**
  - The rise of the smombies and fall of the pedestrians
  - Richard J. Fantus, MD, FACS

### NEWS

- **Dr. Louis Argenta receives 2016 Jacobson Innovation Award**

- **Dr. Chad Rubin remembered as exceptional surgeon and consummate volunteer**

- **AMA HOD approves ACS-sponsored resolution on mass casualty bleeding control**

- **ACS-AEI Postgraduate Course focuses on simulation in surgical education**

- **Board of Governors pillars at work: An update**

- **Amilu Stewart, MD, FACS: Silencing the skeptics**

- **Sarah B. Klein, MPA**

- **Looking forward**
  - David B. Hoyt, MD, FACS

- **What surgeons should know about...**
  - Understanding Medicare Part B incident to billing
  - Neha Agrawal

- **From residency to retirement:**
  - Surgery in Maryland: Guidelines for navigating health care reform
  - Mark R. Katlic, MD, FACS

- **ACS Clinical Research Program:**
  - Two studies pave the way for preoperative therapy in pancreatic cancer patients
  - Matthew H. G. Katz, MD, FACS; Syed A. Ahmad, MD, FACS; and Judy C. Boughey, MD, FACS

- **MHS: Supporting the future:**
  - Amilu Stewart, MD, FACS: Silencing the skeptics
  - Sarah B. Klein, MPA

- **A look at The Joint Commission:**
  - New Patient Blood Management Certification aimed at eliminating unnecessary transfusions
  - Carlos A. Pellegrini, MD, FACS, FRCSI(Hon), FRCS(Hon), FRCSEd(Hon)

- **NTDB data points:**
  - The rise of the smombies and fall of the pedestrians
  - Richard J. Fantus, MD, FACS

### SCHOLARSHIPS

- **2016 international exchange travelers announced**

- **Applications being accepted for Faculty Research Fellowships for 2017–2019**

- **Apply by September 1 for Resident Research Scholarships for 2017–2019**

### MEETINGS CALENDAR

- Calendar of events
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continued on next page
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continued on next page
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The evidence is clear: coordinated, multidisciplinary team-based treatment models are most likely to result in surgical care that is high-quality, safe, reliable, patient-centered, and cost-effective.

As I noted in the November 2015 issue of the Bulletin,* the American College of Surgeons (ACS) has been engaged in various efforts to collaborate with other health care organizations to improve the quality and safety of team-based perioperative care. This month, I provide an update on those initiatives, including finalization of a Statement on Physician-Led Team-Based Surgical Care, the development of guidelines for geriatric care, the release of the Children’s Surgery Verification Standards, and increasing involvement in the Strong for Surgery initiative.

Statement on team-based surgical care

After approximately two years of collaboration, the ACS and the American Society of Anesthesiologists (ASA) have finalized a joint Statement on Physician-Led Team-Based Surgical Care, which is published in full on page 50 of this issue of the Bulletin. Several members of the ACS Board of Regents and their counterparts at the ASA were involved in crafting the statement. We also sought input from multiple surgical organizations and the Society of Hospital Medicine.

This statement acknowledges that coordinated, multidisciplinary care is more likely to result in positive patient outcomes, reduced costs, and greater patient satisfaction. Key members of the surgical patient care team include not only the patient and the operating surgeon, but anesthesiologists, hospitalists, specialty physicians, nurses, technicians, and other health care professionals.

To ensure that all of these providers are communicating and working together in a truly coordinated way that will ensure patients transition safely through the multiple phases and domains of surgical care, several models of team-based care are in development. The statement asserts that although these models will need to be adaptable to a range of practice and institutional environments, all should apply the following principles:

• Active patient involvement in the decision-making process with opportunities provided for patient education, alignment of expectations, and the provision of informed consent
• Optimization of the patient before surgery to reduce risks and enhance patient safety
• Adherence to high-reliability and safety standards
• Evidence-based care to reduce variability and perioperative complications
• Effective coordination of care among all providers involved in the patient’s perioperative care
• Recognition of the operative surgeon’s primary responsibility for confirming the presence of a surgical condition and the need for a surgical procedure, as well as directing or partnering with other team members to deliver optimal perioperative care

Special attention to vulnerable populations

The College has been involved in several collaborative initiatives to reinforce the principles outlined in the Statement on Physician-Led Team-Based Surgical Care, some of which are aimed at protecting our most vulnerable patient populations—the elderly and children.

For example, in January, the ACS National Surgical Quality Improvement Program (ACS NSQIP®) and the American Geriatrics Society’s (AGS) Geriatrics for Specialists Initiative (GSI), with support from The John A. Hartford Foundation, released a new national perioperative guideline for the delivery of quality care for surgical patients who are 65 and older. The ACS Geriatric Surgery Task Force developed the guideline with an expert multidisciplinary panel, which evaluated current evidence and best practices in the medical literature to

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The ACS always has been and always will be committed to ensuring that surgical patients receive care that meets the highest standards and produces optimal outcomes. In recent decades, we have learned that this care is most effectively provided by physician-led, high-performance teams.

arrive at a set of recommendations targeting surgeons, anesthesiologists, and allied health care professionals who provide care to older adults. The guideline is organized into three distinct phases of surgical care—immediate preoperative management, intraoperative management, and postoperative management—addressing issues that commonly arise at each stage in this patient population, which tends to experience more postoperative complications and longer recovery periods.

Also in January, the Children’s Surgery Verification Quality Improvement Program released its latest standards document, *Optimal Resources for Children’s Surgical Care*. The standards set forth in this document are the nation’s first and only multispecialty standards for children’s surgical care and were developed in collaboration with the Task Force for Children’s Surgical Care. The new document includes recommendations on alternative training pathways for anesthesiology, emergency medicine, and radiology and outlines the safety elements that children’s hospitals should have in place to achieve verification.

Strong for Surgery

In addition, the College’s Division of Research and Optimal Patient Care will be taking responsibility for introducing an ACS Strong for Surgery campaign at the national level in the coming months. Strong for Surgery originated in Washington State and centers on evidence-based checklists that surgeons and other health care professionals may use preoperatively to improve clinical outcomes and keep surgeons ahead of the quality assurance curve. At present, the Strong for Surgery initiative focuses on preoperative optimization related to cigarette smoking cessation, nutrition, medication management, and glucose homeostasis.

A Panel Session on this initiative will be presented at Clinical Congress 2016 on Tuesday, October 18, at the Walter E. Washington Convention Center, Washington, DC. Moderating the session will be David R. Flum, MD, MPH, FACS, professor of surgery and director of the Surgical Outcomes Research Center, department of surgery, University of Washington Medical Center, Seattle, who has played a leadership role in Strong for Surgery since its inception. The co-moderator will be Thomas K. Varghese, Jr., MD, MS, FACS, associate professor of surgery, University of Utah Health Care, Salt Lake City.

Working together in our patients’ interests

The ACS always has been and always will be committed to ensuring that surgical patients receive care that meets the highest standards and produces optimal outcomes. In recent decades, we have learned that this care is most effectively provided by physician-led, high-performance teams. The efforts have been carried out in the spirit of collaboration with other organizations that share our commitment to making certain that patients transition safely through each phase of perioperative care, so that they can enjoy the postoperative quality of life they so richly deserve. ♦

If you have comments or suggestions about this or other issues, please send them to Dr. Hoyt at lookingforward@facs.org.
Generations of surgeons: Honoring and modernizing tradition
As trainees and young surgeon members of the Resident and Associate Society of the American College of Surgeons (RAS-ACS), we strive to balance newer forms of communication, technology, and learning with age-old traditions of surgical training and education. Perhaps more than most medical specialties, the House of Surgery takes great pride in our traditions. Historical surgeon leaders and mentors, including the sixth century BC physician Sushruta; Harvey Williams Cushing, MD, FACS; William Stewart Halsted, MD, FACS; and Ernest Amory Codman, MD, FACS, formulated the professional ideals that we strive to meet and serve as examples by which we measure ourselves today.

Factors affecting how we practice
We inhabit a rapidly evolving world. The way we communicate through e-mail and social media, has changed the timeliness with which information is transferred. Social media platforms allow us to share personal information about ourselves. This heightened transparency and exposure has made navigating our relationships with colleagues and patients increasingly challenging, as well as adding to questions about professionalism. As surgeons engage in these changing forms of communication, we must remain flexible and adaptable. Recognizing the efforts of the surgeons who came before us is key to upholding the ideals of professionalism and decorum, particularly in the modern era.

The rapid evolution of technology has also compelled us to rethink how we provide care to our patients. The development of newer forms of minimally invasive scopes and instruments, high-fidelity imaging capabilities, and smaller and finer tools and devices has allowed us to perform extensive operations through barely perceptible skin incisions.

We also bear witness to advances in telemedicine and the use of computers and cameras to visually transfer data. As a result, a rural emergency department can now communicate with trauma surgeons hundreds of miles away. The popularity of walk-in drugstore clinics reinforces societal demand for instant access to medical care and prescriptions. With increased pressure for immediate action by the public, we must remember that what made medicine such a distinguished profession is our reliance on evidence, deliberation, and thought before taking action.

Perspectives from the RAS-ACS committees
The features section of this issue of the Bulletin, written by members of the RAS-ACS, comprises articles that describe the challenges that arise when we try to both honor and modernize tradition. We selected topics by popular vote among our four standing committees: Membership, Issues and Advocacy, Communications, and Education. We hope that you find these articles informative and thought-provoking.

The RAS-ACS is always seeking new members, so if you are a trainee or young surgeon who would benefit from and enjoy involvement in this organization, contact me at mayababu@gmail.com or the RAS-ACS Administrator, Alison Casey, at acasey@facs.org.
Surgery comes of age: The ACS and the evolution of the surgical profession

Until the late 19th century, concepts that modern surgeons may take for granted, such as standards of care, quality, education, and residency training, were largely foreign ideas to members of the profession. This article reviews how trailblazing surgeons and leaders of the American College of Surgeons (ACS) have led the evolution of surgery from an unregulated business to a highly respected profession of well-trained physicians dedicated to improving the care of the surgical patient. This article also describes the increasingly prominent role of women and young surgeons in developing and safeguarding standards of care.

Standards for education and practice

Most surgeons operating in the 19th century were self-taught and unsupervised. Until the founding of the Johns Hopkins School of Medicine, Baltimore, MD, in 1893, U.S. medical schools were disjointed and functioned without a defined curriculum, allowing medical students to graduate without examining a single patient. In 1910, the Flexner Report on medical education was published, demonstrating the need for a standardized medical school curriculum and education.

The lack of standards in medical education also was apparent within surgical practice itself. Anyone could perform a surgical procedure, regardless of training and background. The appendectomy, for example, was one of the first operations developed in the U.S. in 1867, a procedure that resulted from a newly discovered understanding of the disease process for appendicitis. Hundreds of new procedures were created in the final years of the 19th century; unfortunately, morbidity and mortality rates for surgery as a whole were horrific. In 1880, surgical wound infection rates were at 90 percent, and abdominal surgery mortality rates were at 75 percent.

In response to these growing concerns, in 1905 Franklin H. Martin, MD, FACS, established Surgery, Gynecology & Obstetrics (now the Journal of the American College of Surgeons) in an effort to share scientific knowledge and promote innovations to improve surgical practices. In 1913, Dr. Martin led the founding of the ACS. Dr. Martin formulated what would become the requirements for the foundation of the College while traveling on a train: “A standard of professional, ethical, and moral requirements for every authorized graduate in medicine who practices general surgery or one of its specialties...” These same professional, ethical, and moral standards conceived by Dr. Martin continued to be requirements throughout the 20th century and exist to this day.
Other surgical organizations
The birth of the ACS changed surgical practice by creating a professional organization that provided leadership and instruction for all providers of surgical patient care, from medical students to established surgeons. At present, membership in the College is open to medical students, residents, and surgeons in all stages of their careers, with each phase of training serving as a stepping stone toward becoming a Fellow of the ACS.

While the ACS has grown to be the largest surgical organization in the world, it was not the first national surgical organization in the U.S. The American Surgical Association (ASA) was founded by Samuel Gross, MD, in 1880, making it the nation’s oldest surgical association.7,8 Dr. Gross invited distinguished surgical practitioners, writers, and teachers to attend a meeting at the College of Physicians and Surgeons of New York City on May 31, 1880.8,9 This organization would first be known as the American Surgical Society, but under Dr. Gross’ leadership the name was changed to the ASA in 1885 when a group of approximately 50 surgeons assembled in New York to adopt a constitution.8,9 At the time, ASA fellowship requirements included being at least 30 years old, a graduate of a “respectable” medical school, and having a reputation as a practitioner, author, teacher, or original observer in surgery.8

More recently, the Association for Academic Surgery (AAS) was established during a 1967 meeting in Lexington, KY.10 George D. Zuidema, MD, FACS, was both a founding member and the first president of the AAS.10 Membership was initially open to any surgeon with an academic affiliation, and membership grew exponentially from 377 members at its founding to 1,400 members in 1976, and then to more than 2,700 members in the early 1990s—an 800 percent increase in less than 30 years.10 The stature of the AAS also has increased from 37 papers presented in 1976 to more than 140 in 1991, and to nearly 200 by 2001.10

Continued commitment to QI
With the growth of multiple organizations over time, surgical quality and excellence have remained priorities for the ACS. Surgical quality improvement (QI) efforts began as early as 1913 when the Boston, MA, surgeon Ernest Amory Codman, MD, FACS, pioneered the “end result idea” in medicine, which called for patients’ outcomes to be systematically recorded to determine the success of treatment practices and to prevent future mistakes.11-13.

QI is still a high priority for both leaders and members of the College. The centerpiece of the College’s QI initiatives is the ACS National Surgical Quality Improvement Program (ACS NSQIP®). ACS NSQIP originated in the U.S. Department of Veterans Affairs (VA), and VA NSQIP was developed as a result of the scrutiny of VA hospitals in the mid-1980s in response to poor surgical care discovered through the National VA Surgical Risk Study.2,12,14 Subsequent to VA NSQIP’s implementation in 1991, 30-day postoperative mortality and morbidity dropped 43 and 47 percent, respectively.15

In 1999, private sector hospitals started to adopt and implement NSQIP, and in 2004, the ACS launched ACS NSQIP at 14 hospitals.12 Today, under ACS NSQIP Director Clifford Y. Ko, MD, MS, MSHS, FACS, approximately 770 hospitals use the program to improve surgical care quality.12 One of the unique qualities of the ACS NSQIP is that the data collected are risk-adjusted and drawn from medical charts, and not from billing files, which are generally inadequate in measuring quality of care.14 Not only does ACS NSQIP provide guidelines for improvement, it also gives hospitals the necessary tools for improvement initiatives by providing the means and support to start new study projects.14 Dr. Ko stresses the importance of collecting quality data in order to make improvements with the understanding that each hospital has unique needs.14

With health care costs in the U.S. climbing to an alarming $2.9 trillion in 2013, health care policymakers have sought to lower spending through higher quality and more efficient patient care. A cornerstone of this effort has been the pay-for-performance (P4P) model.16 The idea behind P4P—a concept introduced in California in 2001 after the Institute of Medicine (now the National Academy of Medicine) report To Err Is Human documented serious health care deficiencies—is to reward health care providers who meet or exceed...
The modern era of women in surgery began with the “beardless lad.” James Barry, MD—who was eventually discovered to be a woman named Miranda Stewart posing as a man—performed one of the first successful caesarean sections in 1820.

Increasing role of women in surgery
Surgical organizations have continued to evolve to meet the needs and challenges of surgical practice. However, it is difficult to appreciate the present stature of newer surgical organizations without understanding their humble beginnings. Notably, some of the organizations with the greatest growth and development in the last half of the 20th century have offered an expanded role for women and minorities.

The modern era of women in surgery began with the “beardless lad.” James Barry, MD—who was eventually discovered to be a woman named Miranda Stewart posing as a man—performed one of the first successful caesarean sections in 1820. In 1847, Elizabeth Blackwell, MD, who wished to “treat the tumors of women” and to “provide a gentler hand,” was accepted as a medical student by Hobart College (then Geneva Medical College) in Upstate New York, and graduated with honors. In 1849, she became the first woman to achieve a medical degree in the U.S.

Thanks to strong mentors and trailblazing role models, the number of women who are general surgeons has consistently increased over the last 30 years—from 3.6 percent in 1980 to 13.6 percent in 2007. In 1980, 10 percent of general surgery residents were women; by 2010, that number had grown to 40 percent. At present, 15 women are chairs of departments of surgery in the U.S. and Canada.
Four women have served as Chairs of the ACS Board of Governors, three women have received the ACS Distinguished Service Award, two women have been ACS Presidents, and one woman has served as Chair of the ACS Board of Regents.

Patricia J. Numann, MD, FACS, the 92nd President of the ACS, was rejected by residency programs after earning her medical degree from the State University of New York (SUNY) Upstate Medical University, Syracuse. With determination and skill, she completed her training at SUNY and has spent her formidable clinical and academic career at this facility.

Dr. Numann also is the founder of the Association of Women Surgeons (AWS), established in 1982. “It was kind of a gamble,” said Dr. Numann, “but I always had faith in myself.” [Personal communication between Dr. Jadeja and Dr. Numann, April 10, 2016]. To help the AWS become recognized by the College, Dr. Numann turned to John P. “Jack” Lynch, then-Director of what was known as the ACS Organization Department, who, according to Dr. Numann, gave her somewhat frustrating advice. “Don’t let any women who aren’t Fellows join,” Dr. Numann recalled Mr. Lynch stating. “When you’re up to 50 percent, I will submit [your group for recognition]. Our organization had such young members that none of them [were old enough to become] Fellows yet!”

As Dr. Numann’s prominence in the ACS grew, she advanced to First Vice-President in 2010, and then to President in 2011. Reflecting on the success of the AWS and the move toward equality for women in surgery, Dr. Numann said, “We always respected the men. If it hadn’t been for enlightened men, women would never have gotten anywhere.”

Another trailblazer in expanding the role of women in surgery is Heather Logghe, MD, a resident who uses social media to bridge disparities in the profession. In 2015, Dr. Logghe—inspired by the Twitter hashtag #ILookLikeAnEngineer—started the #ILookLikeASurgeon campaign. Since then, more than 13,000 tweets have included this hashtag, earning nearly 34 million impressions in 20 languages from more than 75 countries. Commenting on the results of this viral hashtag, Dr. Numann said, “I think it’s wonderful. It’s important for people to understand it’s not what you look like, it’s who you are. It doesn’t matter if you are a woman or a man. It’s your behavior that defines you professionally.”

**Looking to the future with the RAS-ACS**

Another means of increasing the diversity of the ACS has been a heightened focus on resident involvement in the organization. One of the most prominent supporters of resident involvement was Olga Jonasson, MD, FACS. After serving as the first woman in the U.S. to chair an academic department of surgery at Ohio State University, Columbus, Dr. Jonasson moved back to her childhood home of Chicago, IL, in 1993 to lead what was then known as the ACS Education and Surgical Services Department. Dr. Jonasson recognized the need for an organization that could provide information about the College to residents and young surgeons, encourage resident involvement and leadership development, and provide a voice for residents and young surgeons in the ACS’ leadership. She created such an organization in 2000 by helping to form the Candidate and Associate Society of the ACS (CAS-ACS).23

Initially the CAS-ACS served mainly as a gateway to ACS membership and had very little representation in the organization or at meetings. In 2002, with Dr. Jonasson’s support, the CAS-ACS organized its symposium. James Cipolla, MD, FACS, now section chief of emergency surgery at St. Luke’s University Health Network in Bethlehem, PA, was the first resident member of the ACS Advisory Council for General Surgery, and he recounts the first CAS-ACS symposium at the Clinical Congress: “A call went out to all surgical programs to nominate a resident to attend this first-ever symposium. Our goals were to establish a governance structure. We elected an Executive Council, established resident representation on various ACS committees, and established annual programs (the first topic we discussed, I recall, was the concept of duty hours—the 80-hour-limit rule was not yet in effect).
Several key founding and guiding principles remain prominent themes within the ACS. One of the more important challenges for surgeons is to find innovative ways to remain dynamic and to continually improve.

“We decided to meet biannually at the ACS Spring Meeting and the ACS Clinical Congress. Eventually the Spring Meeting became resident-centric due to our efforts, and many recurring events, such as Resident Jeopardy and Spectacular Case Presentations, were introduced—and some still exist today.” [Personal communication between Dr. Terzian and Dr. Cipolla, April 12, 2016.] The CAS-ACS continued to evolve, and in 2004 the organization was renamed the Resident and Associate Society of the ACS (RAS-ACS).23

Membership in the RAS-ACS happens automatically whenever a physician becomes a Resident Member or Associate Fellow of the ACS. Resident membership is available to surgical trainees who are enrolled in an Accreditation Council for Graduate Medical Education-accredited training program focused on one of the 14 surgical specialties recognized by the ACS—cardiothoracic surgery, colon and rectal surgery, general surgery, gynecology and obstetrics, gynecologic oncology, neurological surgery, ophthalmic surgery, oral and maxillofacial surgery, orthopaedic surgery, otolaryngology, pediatric surgery, plastic and maxillofacial surgery, urology, and vascular surgery—or who have finished an initial residency and are involved in either surgical research or a surgical fellowship program. Associate Fellows are surgeons who have experienced fewer than six years of unsupervised surgical practice or are graduates of surgical residency programs and have entered into another surgical residency, research, or fellowship program.

Many benefits and opportunities are associated with being a part of the RAS-ACS. The RAS-ACS provides leadership opportunities through committees (Advocacy and Issues, Membership, Education, and Communications), and offers chances to participate in ACS committees, chapters, and Advisory Councils. It also provides scholarships to attend the annual Leadership & Advocacy Summit. Members can participate in RAS-ACS essay contests, which can lead to publication in the ACS Bulletin.

RAS-ACS members also are eligible for free admission to the ACS Clinical Congress, a free subscription to the Journal of the American College of Surgeons, discounted

REFERENCES

continued on next page
rates for enrollment in the ACS Surgical Education and Self-Assessment Program, and access to the Fundamentals of Surgery Curriculum. The RAS-ACS also provides its members with career planning resources, networking opportunities (including international networking), advocacy, career cultivation, and connections to fellowship/scholarship opportunities through the ACS Division of Research and Optimal Patient Care’s Clinical Scholars in Residence program.23

A lasting and continuing legacy
Several key founding and guiding principles remain prominent themes within the ACS. One of the more important challenges for surgeons is to find innovative ways to remain dynamic and to continually improve. To obtain FACS status, a surgeon is required to receive education and technical training and to meet professional qualifications, surgical competency, and ethical conduct requirements in order to meet the highest standards established by the College. This lasting legacy, now often taken for granted, is due to the efforts of the many dedicated members and leaders of the ACS who have continued to raise the standards of surgery in the past century. ♦

REFERENCES (CONTINUED)
Talking through time:
Trends in communication and the evolving patient-physician relationship

by Edward S. Shipper, MD; John C. Hardaway, MD, PhD; Erin M. Garvey, MD; and Heather Logghe, MD

HIGHLIGHTS
• Describes the effects of technology on patient-physician interactions
• Illustrates how patient access to medical information affects clinical decision making
• Offers suggestions on navigating the future of the surgeon-patient relationship

Flashback to 1913, the year the American College of Surgeons (ACS) was founded "to improve the quality of care for the surgical patient by setting high standards for surgical education and practice." Approximately 6 percent of the U.S. population owns a telephone. Face-to-face interactions are the cornerstone of the patient-physician relationship. The "father of modern medicine," Sir William Osler’s adage, "Listen to your patient, he is telling you the diagnosis," is accomplished through office visits and house calls.

Today, communication is handled much differently. An estimated nine out of 10 Americans own a cell phone, and just as many have access to the Internet at home. Physicians no longer make house calls, and for a growing number of patients, text messaging and telemedicine are alternatives to phone calls and traditional office visits. How has the way we interact and communicate with our patients evolved since the College was established, and how will this paradigm shift affect the future of the patient-physician relationship?

Current use of technology in patient communication
Despite the invention of the telephone in 1876 and the development of electronic health records in 1972, e-mail in 1993, and Facebook in 2004, advances in technology have had surprisingly little effect on patient-physician communication. A Nielsen study in 2015 showed only 28 percent of the approximately 5,000 Americans surveyed had access to a patient portal, 15 percent to online messaging or e-mail with their physician, and 9 percent to text message appointment reminders, despite 34 percent, 28 percent, and 28 percent of patients, respectively, stating that they would like to use these forms of communication.

Although advances in communications technology have had a limited effect on the logistics of patient-physician communication, democratization of information facilitated by the Internet has forever changed the dynamics of the patient-physician relationship. Perhaps the most notable change is the evolving role and expectations of the public regarding patient care. According to a 2014 survey by the Pew Research Center, 72 percent of adult Internet users say they have searched online for information on a range of health issues, most frequently about specific diseases and treatments. As a result, patients now come to their physicians with more knowledge of their specific health condition than ever before. No longer seeking unquestionable paternal guidance, patients expect to play an active role in their care, particularly in the form of shared decision making.
Because most patients consult “Dr. Google” and social media before seeking medical attention, many surgeons have become active curators of online medical information. Although social media may have yet to find a role in direct patient care, numerous surgeons have forged a professional online presence to provide patient education to the general public as well as emotional support to patients at large. Surgeons are making this type of contact with patients through blog posts, Facebook pages, YouTube videos, tweets, and tweetchats.

Deanna Attai, MD, FACS, co-moderator of the #BCSM (breast cancer social media) Twitter support chat, is an example of a surgeon who uses social media to connect with the general public. Dr. Attai considers social media to be a powerful tool for providing patients with education, support, and guidance. She specifically uses Twitter to disseminate information about new studies, dispel myths, and encourage second opinions when appropriate. She also has discovered that social media offers an unprecedented opportunity to learn from her patients. Dr. Attai’s experience moderating the online breast cancer chat has fostered a deeper understanding and appreciation for the patient experience—insights that she may not have been able to glean from 15-minute office visits. [Personal communication between Dr. Logghe and Dr. Attai, March 19, 2016.]

The evolving surgeon stereotype

These changes in the patient-physician relationship are transforming the public’s perception of surgeons and our profession. The traditional surgeon archetype has been the “mythical surgeon”—someone paged in the middle of the night, a well-coiffed demigod who glides into a patient’s room with only a few moments to frame the gravitas of the situation before urgently charging to the operating room to save the patient’s life. Patients did not communicate with the traditional surgeon; they experienced him (gender intentional), left only to wonder in awe. Lack of access to medical information compounded by reverence for the dedication and expertise of the surgeon seemingly obviated the need for patients to understand the profound effects of their disease on their own experiences.

The democratization of information over the last two decades is changing patients’ perceptions of the surgical profession, and that change has produced a subtle yet significant reshaping of the way that patients receive their care. Today’s surgeon is stepping down from Mount Olympus to engage with the public through commentary on Facebook and Twitter and other social media platforms. As one patient-blogger stated, “These surgeons go home at night like the rest of us and eat dinner, toss and turn in bed wondering about the complexities of life, brush their teeth, laugh, cry, wipe a child’s tear, hug a friend in need, run, weight lift, play the violin…” In short, these new lines of communication with our patients are driving the ascent of a new surgeon archetype: the “human surgeon.” This trend toward the humanization of the surgeon has paralleled the shift in patient care from physician paternalism toward patient autonomy and shared decision making.

While advances in communication and access to information have coincided with a symbiotic evolution in the patient-physician relationship, they have also resulted in unintended consequences that are often at odds with surgeons’ own perceptions of, and aspirations for, our profession. For instance, the importance of patient-centeredness is underscored by a multitude of new regulatory policies requiring physicians to divulge practice outcomes and patient satisfaction scores. Consider the situation when the WebMD-prepared patient presents to the surgeon’s office with a clear diagnosis and an even clearer expectation of an operation. If, after thoughtful consideration of the patient’s mind and body, the surgeon recommends an alternate treatment plan, the patient may report a low satisfaction score, even if the surgeon’s recommendation embodied the utmost compassion and appropriate application of medical knowledge. From the surgeon’s perspective,
Our tradition teaches us that every patient is different, and we must embrace that uniqueness to deliver excellent care. Thus, it is ironic that the same forces that have served to humanize surgeons are, in a sense, dehumanizing our patients.

these metrics betray a complexity inherent in every surgical patient that simply cannot be captured quantitatively.12

Our tradition teaches us that every patient is different, and we must embrace that uniqueness to deliver excellent care. Thus, it is ironic that the same forces that have served to humanize surgeons are, in a sense, dehumanizing our patients. When the democratization of information and concomitant shift in the patient’s expectation to participate in their care creates an incentive against the surgeon’s ability to deliver that care, both patients and surgeons lose. Surgeons of today must continue to grapple with this tension to project the image of the surgeon to which we aspire in a way that resonates with our patients.

The future of technology in patient communication
Looking forward and envisioning how the surgeon’s use of information technology (IT) will continue to evolve and shape the patient-physician relationship, it is prudent to critically assess the history of IT in the surgical workplace. The introduction of IT into the health care environment was initially heralded as a means of improving efficiency and workflow, with the promise of more time for one-on-one communication and an enhanced personal patient-physician encounter. Anecdotally, however, the need for surgeons to sit at a computer with their back to their patients while they review patient data and electronically document key clinical findings has led many surgeons to argue that technology has disrupted traditional workflow and impersonalized the patient-physician relationship.

A 2012 report from the Agency for Healthcare Research and Quality sought to objectively evaluate the effect that IT has had on health care processes, clinical outcomes, shared decision making, and patient-physician communication.13 Among 324 reviewed studies, IT applications (such as clinical decision aids, IT-guided disease management, telemedicine/telemonitoring systems, personal health records/patient portals, and electronic messaging)
tended to demonstrate improvements in outcomes and metrics; however, several barriers to optimization also were identified (see Table 1, page 21). Improved outcomes generally are well received by all stakeholders in health care delivery, but the cost has been the intrusion and otherwise indelible mark that IT has left on the patient-physician encounter.

To maximize the clinical benefits of IT and minimize the strain it places on the patient-physician relationship, surgeons must explore new ways of applying technology. Jonathan Weiner, DrPH, professor of health policy and management, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, has identified several educational and socioeconomic factors that influence how electronic-health (e-health) can impact patient-physician communication (see Table 2, this page).14 To improve communication, Dr. Weiner argues that efforts in the e-health domain will require dedicated investment by clinicians, managers, policymakers, and scientists, who must work hand-in-hand with consumers to drive a shift from the standard 15-minute face-to-face, one clinician/one patient interaction, toward a more global concept of population health and wellness support. Moving forward, surgeons will need to leverage these factors to close the digital divide in terms of patient and physician access to IT as well as their familiarity with its use to preserve the sanctity of the patient-physician relationship.

The path ahead
The challenge for the surgeon leaders of the future is determining how to maintain the core elements of patient-physician communication—creating interpersonal relationships and exchanging information to determine optimal treatment plans in a culturally sensitive and value-centered manner—in the face of the rapidly changing and often disruptive nature of technology and social media. A truly multidisciplinary effort that draws expertise from the fields of interpersonal/mass communication, clinical sciences, health informatics and IT, public health,

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**TABLE 2.**
IMPACT OF E-HEALTH ON PATIENT-PHYSICIAN COMMUNICATION

- Health IT and its embedded software will mediate almost all health information and will be the source of almost everything that physicians and other clinicians will learn about their patients.
- Patient information will be accessible to all providers anywhere, anytime.
- Almost all patient-provider interactions will be mediated by the electronic workflow (that is to say, supported by digital guidelines and protocols) before, during, and after any patient-provider contact.
- Patients can become full partners in their health care and wellness-enhancing processes. These patients will have electronic access to almost as much information about their condition and the medical evidence base as their providers.
- The art and science of care surrounding the traditional face-to-face patient-provider interaction will be forever changed as all aspects of communication, interaction, and information flow will become mediated and monitored by electronic tools.
- The IT-mediated process will also dramatically change communication patterns between providers. IT will enable all providers to work as a team and to coordinate their actions far more effectively, even if they are at different locations.

...
RAS-ACS: GENERATIONS OF SURGEONS

population sciences, and health management and policy will all be required to ensure that e-health applications and e-health systems are designed with an evidence-based focus and with attention to preserving the sanctity of the patient-physician relationship.

That patient-physician relationship has been and will continue evolving with time, both as a byproduct of technological advances as well as shifting societal values. From the paternal house calls of the early 1900s to the present day physician-led tweet chats, modes of communication have changed, yet the goals of restoring patients’ health and well-being remain steadfast. Relieved of the unrealistic expectations of the mythical surgeon, the medical students and residents of today must leverage the tools of modern communication with the grace and humility of the human surgeon to fulfill the goals of the founders of the ACS and continue “to improve the quality of care for the surgical patient.” ♦

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“Pimping”:
Time-honored educational tradition
or relic of the past?

by Jessica R. Burgess, MD; Elizabeth Bailey, MD, MsEd; Kristin M. Busch, MD; Rebecca L. Hoffman, MD, MSCE; and Luke V. Selby, MD, MS

HIGHLIGHTS
• Looks at the tradition of “pimping” in surgical and medical education
• Describes the advantages and disadvantages of the pimping process
• Explains how pimping can be successfully applied in today’s surgical training environment

The Socratic method, or directed questioning aimed at assessing and evaluating a learner’s knowledge, is a traditional teaching modality commonly used in the clinical setting. “Pimping,” on the other hand, is a line of questioning meant to affirm the hierarchical order of a small group of learners by cultivating feelings of humiliation, fear, and intimidation for those answering the questions. Some learners and medical educators have recently sought to determine why pimping is increasingly considered a form of the Socratic teaching method.

This article looks at the use of pimping as a common pedagogic technique throughout the history of formal medical education, describes the pros and cons of pimping, explains how medical students respond to this method, and offers suggestions to effectively engage in pimping.

Time-honored tradition
Pimping may have preceded the 17th century practice of medicine, but the technique’s earliest reference is attributed to William Harvey, MD, a London-based physician who first described the systemic circulation in 1628. German physician Robert Koch, MD, in 1889 and Sir William Osler, MD, at Johns Hopkins University, Baltimore, MD, in 1916 later referred to pimping in the medical literature, but it wasn’t until the Journal of the American Medical Association published an article by Frederick Brancat in 1989 titled “The art of pimping” that this method of teaching was popularized.

Surgeons in particular are known for their use of pimping as an educational strategy. The art of pimping for the purpose of demoralizing students has certainly contributed to the perception that surgeons are difficult and may have turned off medical students who might otherwise have been interested in pursuing a career in the profession. However, the unique learning environment that a surgeon practices in, more than any other specialty, is conducive to the type of short, directed questioning that is characteristic of both pimping and the Socratic method.

Over the past several generations, the definition of pimping has been reclaimed, in some respects, to characterize the type of teaching that is feasible during a busy surgical rotation and an approach that is not necessarily malicious.

An appreciation of different learning styles, the incorporation of technology into everyday learning, and an explosion in the amount of knowledge that must be mastered by the medical student has changed how learning occurs today. Educators
An appreciation of different learning styles, the incorporation of technology into everyday learning, and an explosion in the amount of knowledge that must be mastered by the medical student has changed how learning occurs today.

who successfully navigate the blurred line between the Socratic method and pimping should consider the varying views of each generation of learners on topics ranging from career goals to core values (see Table 1, page 26). The pimping technique has many benefits. How can it be updated to apply to today’s generation of learners?

The positives of pimping
More than 2,000 years ago, Aristotle wrote, “Exercise in repeatedly recalling a thing strengthens the memory.” Since then, psychologists and neurobiologists have conducted numerous studies supporting a phenomenon known as the testing effect. The testing effect posits that the retrieval of information produces better retention than restudying the same information for an equivalent period of time. Researchers who study this approach postulate that the active recall of information from memory creates retrieval routes, improving the likelihood that the information can be successfully retrieved in the future. The success of creating such retrieval routes is thought to relate to the amount of effort required to reprocess each memory, with more extensive and more difficult reprocessing correlated with greater retention.

Another critical component of information recall is instructor feedback. Receiving feedback after attempted memory retrieval, regardless of how detailed a student’s information recall is at that moment, improves the likelihood of successful future recall. Timing of feedback is important, with immediate feedback, rather than delayed feedback, leading to improved future performance.

Pimping, as often performed in the modern era of medical education, requires the ultimate form of active recall. Pimping requires a learner to dig into his or her knowledge base to search for the appropriate response on the spot. While potentially stressful, the everything-is-fair-game nature of this technique creates a high-pressure situation ideal for augmenting the learning process. Individuals who have been “pimped” can often recall the details of the situation and their response (correct or incorrect) months after the event. By providing immediate feedback, the ideal “pimper” is engaged in the student’s learning and seeks to provide guidance and impart additional knowledge as needed, further enhancing retention.

In its purest form, this technique allows the instructor to ask scaffolding questions, which involves asking more difficult questions or questions that encompass an increasingly greater span of knowledge in a sequential order to ascertain the limits of the student’s understanding. This is a powerful tool when performed without judgment. It allows the teacher to tailor instruction to the student’s current level of knowledge rather than simply reiterating what the student already knows or lecturing above the student’s current level of understanding.

Notably, pimping allows students to acquire and apply knowledge in clinically relevant situations. The constructivist theory of active learning, initially described by American psychologist John Dewey, is based on the idea that learning occurs most naturally in the context of problem solving and immersion in the learning experience. Pimping acts as an extension of this theory by presenting the learner with a problem regarding a clinical scenario. If executed successfully, this contextual questioning prepares the student for independent practice.

Pimping pitfalls
Like many aspects of surgical training, pimping has its share of detractors and has recently come under attack as an educational tool that is past its prime. In fact, some institutions prohibit the practice altogether. Students have traditionally reacted poorly to pimping for several reasons: it promotes an old-fashioned hierarchy, it creates a stressful learning environment, and it may be perceived as humiliating or embarrassing by some students. Furthermore, pimping is often used as a narrative foil to highlight actual humiliation in the clinical setting, which is, of course, not to be tolerated.
By its very nature, this technique promotes the hierarchy within medicine. As the team gathers on rounds outside a patient’s room and the attending physician begins a line of questioning, slowly progressing from the third-year medical students to fourth-year students to first-year residents and so on up the chain of command, it becomes clear to everyone on the team not only where they stand in the attending’s view (as most attendings pimp “up the chain,” not down it), but also how their medical knowledge stacks up against that of their peers.

Anyone who has ever been on the learner side of pimping has experienced their mind going completely blank when asked a question. This phenomenon is often the questioner’s goal: force the student or resident to quickly think on his feet and deliver the correct answer. If the trainee can successfully fend off the fear of the moment and answer the question, he may be more prepared to do so when faced with an emergent, stressful patient scenario.

However, the stressful environment that pimping is designed to create is one reason students often find it counterproductive, as not all medical students intend to enter a discipline where they will have to make immediate and consequential decisions. Even those who do plan careers in such specialties, including surgery, are often unaccustomed to performing in such conditions and are unable to work past their initial mental block.

Although it is important to recognize that some of the utility in pimping comes from the embarrassment that students feel when they publicly provide the wrong answer to a question, not all learners will experience the advantages of this educational strategy. Some students may be so turned off by the public embarrassment that they are unable to recover and effectively participate in future learning opportunities. Recent surveys by the Association of American Medical Colleges have shown that almost 50 percent of students report being publicly embarrassed during their clinical rotations. It is unclear whether all of this reported embarrassment is due to pimping. But in an environment where medical student mistreatment is increasingly recognized, and recruiting students into a surgical career is becoming increasingly important, any technique that by design elicits embarrassment warrants close scrutiny.

**How students respond to pimping**

Despite recent literature criticizing the use of pimping in medical student education, few studies have examined student preferences and their response to pimping. Wear and colleagues interviewed 11
The primary goal of successful pimping should be to create an interactive learning environment that effectively highlights knowledge deficits without humiliation.

fourth-year medical students regarding their experience with pimping during their clinical years. All student respondents said they had experienced pimping at some point in their medical education. Although some students had experienced embarrassment or humiliation after being asked questions they felt were above their level of education, all students responded positively to the pimping technique. They noted an appreciation for pimping as a way to learn and for their instructors to measure the student’s level of knowledge.

A study from 2011 by Zou and colleagues compared teaching third- and fourth-year medical students using the Socratic method with standard PowerPoint-based didactic lectures. Of the 74 medical students evaluated in the study, 81 percent preferred the interactive dialogue of the Socratic method to a standard lecture, and 73 percent of students found pimping to be an effective method of learning. Two-thirds of the students preferred interactive sessions in which students volunteered answers as opposed to the historical approach of pimping in which students are called upon randomly to answer questions. Overwhelmingly, when asked the preferred method of small-group learning (five to eight students and one instructor), 93 percent of students preferred the Socratic method to didactic lectures. Student comments included a sense of improved knowledge when they were actively questioned (whether they answered correctly or incorrectly) and a preference for volunteering answers rather than being singled out. These studies affirm that—when done in a positive way that focuses on interactive learning as opposed to reinforcing the traditional surgical hierarchy—students favor this type of instruction.

**Successful pimping strategies**

The primary goal of successful pimping should be to create an interactive learning environment that effectively highlights knowledge deficits without humiliation. Several important considerations can
STRATEGIES FOR PRODUCTIVE PIMPING

- Ground the Q&A in a clinical scenario
- Be cognizant of the effects of a dominant or aggressive learner on others
- Ask questions with multiple answers to involve everyone
- Apply the 50/50 principle: 50 percent core or easy knowledge, 50 percent challenging
- Apply scaffolding questioning
- Provide immediate and constructive feedback

be incorporated to easily create a positive learning environment, even when a strategy like pimping is used (see sidebar, this page).

Students who recall pimping as a negative experience frequently cite instructors who asked nearly impossible questions, sometimes about less-than-relevant historical trivia, which the students perceived as a way to further promote surgical hierarchy and to spotlight the instructor’s knowledge rather than to teach.2 This situation can be avoided by using clinical scenarios as the framework, thereby providing a meaningful and pertinent foundation for the remainder of the question-and-answer (Q&A) session.

An educational session that incorporates the pimping method can easily be dominated by an outgoing or overly aggressive learner. To engage all learners and not just those students who naturally respond well to this type of teaching, it can be helpful to ask questions that have multiple answers and require each student to supply an answer. For example, instead of asking for a volunteer or calling on an individual to list the lab abnormalities seen in sepsis, the surgeon teacher can ask each person in the group to answer the question. Using this technique, students are able to work together as a team, yet retain an individual responsibility to be prepared.

Pimping can be an effective way for instructors to identify a learner’s baseline level of knowledge, which can help to alleviate redundancy and boredom. Instructors can use the 50/50 principle to help tailor the difficulty of the questioning;4 50 percent of the questions should address knowledge that the instructor already expects the students to know. Not only do these questions serve as positive reinforcement, but they show the instructor that this is information with which the students are already comfortable and more time can be spent on high-level questions. The remaining 50 percent pertains to information that the instructor feels is important to the topic but does not expect the learner to already know. This higher level of questioning not only provides the framework for getting at the “meat” of the instruction, but also highlights knowledge deficits and guides further assignments.

Positive reinforcement is an important part of creating an engaging learning environment where students can feel comfortable both answering questions and asking for clarification when there is uncertainty. While it is important to give praise and encouragement for correct answers, the more difficult
task is to keep learners involved and confident when they are mistaken. When a student is unable to provide the correct answer, diagnosis, or treatment, it can be helpful to take a step back in the questioning and start with more basic questions that will help the student arrive at the correct answer as he thinks through the problem.

For example, if a student is unable to recall the correct treatment for cholangitis, the instructor can take a step back and ask the learner to describe the primary problem in cholangitis. If the student is able to identify that an obstruction resulting in infection is the root of the problem, the student may be able to recognize that relieving the obstruction with decompression will be the treatment. Using this method, not only will the student have thought through the problem and reached the correct answer independently, but the student also will gain confidence in his ability to solve clinical problems.

Undoubtedly, many practicing surgeons recall their experiences with being pimped as trainees with a fond nostalgia, as a rite of passage, and many also would likely agree that it was an invaluable part of their training and education. It is important that, as surgical education strives to keep pace with new methods of transmitting information, the tried-and-true methods continue to be applied—but perhaps with some updating and forethought in order to engage all generations of learners.

The time-honored tradition of questioning and “high stakes” learning that motivated each of us to take an active part in the learning process cannot be underestimated. It is this type of education that prepares medical students and residents for the true high stakes to come as they advance in their careers.

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The ACS and advocacy: A tradition of protecting our patients and advancing our profession

by Kevin Koo, MD, MPH, MPhil; Naveen F. Sangji, MD, MPH; SreyRam Kuy, MD, MHS; and Adeyemi A. Ogunleye, MD, SM

HIGHLIGHTS
- Describes the College’s advocacy efforts at the state level
- Discusses federal advocacy efforts, including those activities that resulted in repeal of the SGR and are presently aimed at addressing the surgeon workforce shortage
- Encourages young surgeons to get involved in ACS advocacy efforts

From fundamental changes in the physician-patient relationship to the evolving role of technology, nearly every aspect of surgery has undergone a transformation in recent decades. Yet one constant of surgical practice has been the role of tradition, whereby each generation of surgeons has guided and shaped the next.¹

A vital part of the tradition of surgery is advocating on behalf of the surgical patient.²⁻⁶ The annals of the American College of Surgeons (ACS) are replete with examples of physician advocacy spearheaded by both nationally prominent surgeons and local advocates. Contemporary leaders continue to reimagine and reinvent this tradition, but the essence of advocacy remains unchanged: sustained, engaged, grassroots efforts at the national and state level to protect our patients and our profession.²⁻⁸

These efforts have included advocacy for improved access to care, payment and liability reforms, and improvement in the quality of care and outcomes for the surgical patient. The ACS Professional Association political action committee (ACSPA-SurgeonsPAC) was established in 2002 to give surgeons a more powerful voice in the state and federal legislatures. In 2014, the ACS launched SurgeonsVoice, an online platform for surgeons to communicate with policymakers on the issues that matter most to their practices.⁹ In addition, the annual ACS Leadership & Advocacy Summit connects hundreds of surgeon advocates in person who share key issues with lawmakers on Capitol Hill.¹⁰⁻¹¹ These efforts, among many others, have sustained successful policy campaigns, including an effort that led to the passage of the Medicare Access and CHIP (Children’s Health Insurance Program) Reauthorization Act (MACRA) of 2015, which resulted in the repeal of the sustainable growth rate (SGR) formula used to calculate Medicare physician payment.¹²⁻¹⁴

Through the Resident and Associate Society of the ACS (RAS-ACS) and collaborative efforts with the College’s leadership and its state chapters, Resident Members and Associate Fellows maintain the tradition of physician advocacy.¹⁵⁻¹⁶ This article describes recent regulatory and legislative efforts championed by surgeon advocates and their continued impact on current and future generations of surgeons, including the following: physician payment reform; current efforts to protect and preserve the workforce through Graduate Medical Education (GME); and the future of surgeon-led advocacy, particularly the work of the RAS-ACS Issues and Advocacy Committee.
Surgeons have been especially effective in various states in lending their voice in support of injury prevention legislation, including seatbelt regulation, helmet laws, youth athlete concussion education and prevention, prevention of falls by elderly patients, child safety restraints, and regulation of all-terrain vehicles.

State efforts

The College’s state advocacy efforts enable swift and nimble responses to changes at the regional level. The ACS maintains a well-organized state-level surveillance mechanism. One Councilor from each ACS chapter functions as the advocacy expert and is responsible for its grassroots advocacy efforts. Surgeons also can participate in the District Office Contacts by Surgeons Program, which fosters close relationships between state policy leaders and individual surgeons, who then serve as resources to their elected officials on changes and challenges in health care policy. College members who would like to have their finger on the pulse of statewide legislative agendas also may participate in the ACS Councilor program and act as the “eyes and ears” of the State Affairs team in the ACS Division of Advocacy and Health Policy, Washington, DC.

Surgeons also are encouraged to take action at the local level by participating in the Advocacy Lobby Day Grant Program. The ACS supports chapter lobby days by offering the State Lobby Day Toolkit and matching grants of up to $5,000.17

Surgeons’ Voice is another way the College provides members with support at the local level by offering an online resource for engaging in state advocacy initiatives, including Surgeons as Advocates: A Guide to Successful State Advocacy, a comprehensive handbook on effective, sustainable campaigns for local and regional leaders.18 All of these resources foster lasting relationships between surgeons and their elected state officials. By becoming knowledgeable and respected champions for surgical patients and practice, state-level advocates serve as an invaluable point of contact for their elected officials as well as a link between legislators and the ACS.

The ACS has concentrated state-level efforts in several issue areas. One example is quality and patient safety, which includes injury prevention efforts and scope-of-practice regulations.19 Surgeons have been especially effective in various states in lending their voice in support of injury prevention legislation, including seatbelt regulation, helmet laws, youth athlete concussion education and prevention, prevention of falls in elderly patients, child safety restraints, and regulation of all-terrain vehicles.19 Scope-of-practice efforts have recently focused on developing guidelines for complex surgical procedures by nonphysician providers.19

Another area of state-level focus is the implementation of the Uniform Emergency Volunteer Health Practitioners Act (UEVHPA), model legislation that allows state governments to give licensing reciprocity to emergency and disaster personnel from other states. Local surgeon advocates, with the support of the ACS and their state chapters, have called for passage of the bill in multiple states, and successful versions of the bill have passed in Arkansas, Colorado, Illinois, Indiana, Kentucky, Louisiana, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, Tennessee, Texas, Utah, and the District of Columbia. Implementation of this act is an ongoing process, with recent focus on passing versions of the UEVHPA in Georgia and Pennsylvania.

The ACS also supports state-level policies related to physician payment, including Medicaid reimbursement; classification of certain surgical procedures, such as bariatric surgery, as essential insurance benefits; and opposition of restricted networks for insurance sold on state exchanges.19

Federal efforts

At the federal level, recent legislative priorities have included Medicare physician payment, maintenance of the fee-for-service payment model, support for a merit-based approach to achieving benchmarks for incentive programs such as the meaningful use program for electronic health records, the Value-Based Payment Modifier Program, and the Physician Quality Reporting System, as well as reduction of administrative burden of these programs.20 Medical liability reform is a perennial topic of concern, and most recently, the ACS supported the Saving Lives, Saving Costs Act (H.R. 4106), which proposes the establishment of independent medical review panels to evaluate liability lawsuits, provide liability protections, and discourage frivolous litigation while promoting patient safety.21 Similarly, the
College’s efforts have spotlighted liability protection for trauma providers, such as the Health Care Safety Net Enhancement Act (H.R. 836/S. 884) and the Good Samaritan Health Professionals Act (H.R. 865). Repeal of the SGR
A notable and successful recent effort by the ACS, in collaboration with dozens of specialty societies and physician groups, was the repeal of the SGR. A product of the 1997 federal budget negotiations, the SGR tied Medicare payment rates to growth in U.S. gross domestic product (GDP) to rein in health care spending; when physician spending grew less than GDP, reimbursement would increase, and vice versa.

Each year since 2002, the SGR would trigger cuts in Medicare reimbursement as a result of high health care spending relative to the concomitant change in the GDP, bringing with it the threat of decreased patient access to physicians. In response, Congress passed 17 retroactive, increasingly expensive stop-gap funding bills to cover the budgeting shortfall, a practice nicknamed the annual “doc fix.”

The ACS played a leading role in a multispecialty coalition to repeal the SGR. Year after year, Medicare physician reimbursement remained a top legislative priority, but despite general agreement among members of Congress that the SGR was a failed experiment, attempts to replace the flawed formula repeatedly stalled due to disagreements about the potential alternative and how to fund it. Persistent efforts by ACS Fellows and staff eventually came to fruition. The multi-year initiative ultimately succeeded with the passage of MACRA, which set automatic increases for Medicare reimbursement rates until 2019 and outlined a Merit-based Incentive Payment System (MIPS) program to launch thereafter.

The ACS was in the vanguard of SGR repeal efforts for more than a decade, supporting ACS Fellows in advocacy efforts in their cities and states, carrying out sustained federal lobbying on the issue, and strategizing with other medical groups. The success of the campaign was a testament to the importance and potential of surgical advocacy at the federal level and meaningfully demonstrated why surgeons need to stay abreast of health policy changes that will affect their practices, their patients, and their collective effort to improve the delivery of surgical care.

Preserving the surgical workforce
As Resident Members of the ACS look to the future of surgical advocacy, several issues present both challenges and opportunities for the health care profession. Graduate medical education reform efforts to train and maintain the health care workforce is a priority across every specialty of medicine because the consequences of a physician shortage will be felt for years to come. During the past decade, the number of seats in U.S. medical schools has come under scrutiny as estimates suggested that schools were graduating too few physicians to replace those retiring. Through diverse federal and state funding programs and public–private partnerships, more than a dozen new medical schools have matriculated their first classes in the last five years, boosting the physician supply by several hundred graduates each year.

However, GME has become a new bottleneck as the number of federally funded residency positions remains capped and insufficient, not only to meet projected demand for medical care two decades from now, but also to satisfy the immediate demand for postgraduate training by growing numbers of U.S. medical school graduates. The Association of American Medical Colleges has estimated that within 10 years, demand for physicians will outstrip supply by up to 90,000. Whereas early projections pointed to primary care as the area of greatest need, newer models now underscore an urgent need for both generalists and specialists, who may account for half or more of the shortfall. So, to meet the health care needs of the nation’s aging population, an increase in the number of physicians of every kind, including general and subspecialty surgeons, will be required. Because postgraduate surgical training takes five to 10 years, the time for GME reform to alleviate demand a decade from now has already arrived.
The ACS has articulated principles to guide responses to proposals to renew, replace, or reorganize the GME system.

The ACS has articulated principles to guide responses to proposals to renew, replace, or reorganize the GME system. First, the ACS supports the recommendation from the Institute of Medicine (now the National Academy of Medicine) to establish a GME transformation fund, which would aid in the development and assessment of new GME programs, performance measures, and payment models. Second, the ACS is interested in proposals for a regionalized GME governance system—akin to existing systems used in organ procurement or trauma care—that could respond more flexibly to the changing demographics and health care needs of a specific population. Third, underscoring an ongoing need for comprehensive, reliable evidence on the workforce, the ACS supports the systematic collection and reporting of national workforce data so that the projections on which policies are crafted remain evidence-based.

Companion bills have been introduced in Congress to address workforce deficiencies. The Resident Physician Shortage Reduction Act (H.R. 2124/S. 1148) increases the number of residency positions by 15,000 over five years and, notably, recognizes the need for both primary care and specialist physicians by directing that half of the new positions be in critical need fields, such as the surgical specialties. The legislation also outlines criteria for distributing the new positions, such as by giving priority to states with new medical schools. As of June 2016, the House bill had more than 100 bipartisan cosponsors; the Senate version had 14 Democrat cosponsors.

Other bills have addressed GME issues through various funding mechanisms, regulatory reforms, and programs to study geographic variation in the projected shortage. Continued review of legislation by surgeons and surgical advocates will be critical to ensure that proposed reforms are consistent with anticipated changes in the surgical workforce and in patient needs.

The road ahead: Inspiring future surgeon advocates
GME reform is not the only active issue that should be on surgeons’ minds. A dozen other priorities, ranging from cancer research appropriations to quality metrics being

REFERENCES
incorporated into Medicare payment models, offer diverse points of entry into advocacy for surgeons in every practice setting and specialty, with all levels of experience and interest. Examples are as follows:

• The metrics for MIPS payment, which will be adjusted based on physician performance in defined categories (quality, resource use, clinical practice improvement activities, and meaningful use), still need to be articulated and to accurately reflect how surgical care is delivered.21

• President Obama’s National Cancer Moonshot Initiative to accelerate cancer research and discovery has underscored the work of a coalition of cancer-advocacy organizations, including the ACS. This coalition has lobbied Congress for increased federal funding for cancer research and prevention programs through the National Institutes of Health and Centers for Disease Control and Prevention.22

• Challenges related to the widespread adoption of health information technology remain a concern, including electronic health record security and interoperability; and the rollout of the International Classification of Diseases, 10th revision, for coding, billing, and disease data collection.23

• Bills reauthorizing regional trauma systems and grants for emergency care pilot projects, as well as providing federal assistance to critical-access trauma centers for uncompensated costs, passed the House (H.R. 648) in 2015 but stalled in the Senate and have yet to be addressed.24

The RAS-ACS Issues and Advocacy Committee has been an active partner with the ACS Division of Advocacy and Health Policy to inspire and train the next generation of leaders in surgical advocacy. The committee sponsors resident-led initiatives to engender discussion related to surgical training, provides forums for conflicting viewpoints, and helps outline guidance in areas of controversy. Most recently, the RAS-ACS Symposium at Clinical Congress 2015 addressed surgeon engagement with social media...
in their professional lives. The robust discussions during the symposium prompted the RAS-ACS Issues and Advocacy Committee to appoint a workgroup of trainees and ACS members to develop guidelines on social media use, a timely adjunct to the ACS Statements on Principles for surgeon professionalism.

Conclusion
Like previous generations of surgeons whose advocacy efforts addressed new challenges to patient safety and surgical care, contemporary surgeons and trainees face issues that will evolve with the shifting political landscape and practice patterns. Dedicated surgeon engagement in local, state, and federal advocacy will be imperative to combat regulatory and legislative threats to quality, access, payment, and the surgical workforce. The past successes of the ACS reflect the commitment of surgeon leaders across the nation whose boots on the ground approach paved the way forward. Together, surgeons of today and tomorrow have an unprecedented opportunity to shape the direction and potential of surgical advocacy, ensuring the protection of our patients and the future of our profession.

Acknowledgement
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Since William S. Halsted, MD, FACS, first developed his principles for the training of surgical residents, young surgeons have faced the challenge of acquiring surgical skills and clinical experience in the pressure cooker of residency. With limited time, increased patient volume, administrative responsibilities, and the overarching objective to keep pace with the wealth of new research, hospitals and house staff alike are using technology-based tools as clinical and educational aids. Advances in electronic health record technology combined with the vast amount of health care data available on the Internet give users quick access to reference and self-assessment tools at the touch of a button on a smartphone or tablet. At the same time, innovative techniques in the operating room (OR) have led to the creation of laparoscopic and endoscopic instruments, robotic consoles, stapling and cautery devices, and advanced audio-visual aids. Surgeons can remotely consult one another through telementoring and share ideas or discuss clinical decisions and strategies internationally via teleconferencing. Now more than ever, technology-based media and the virtual world have become essential components of surgical education.

Technology advances in surgical education

As the surgical community develops new treatment modalities and the procedure repertoire extends to include technology-assisted and minimally invasive approaches, the education of surgical trainees must continue to adapt and evolve. The days of operating theaters and “see one, do one, teach one” are waning in favor of safer, more efficient, and measurably effective means of acquiring surgical skills. Implementation of the 80-hour workweek has limited the time residents spend in the hospital and the OR, while the understanding of the pathophysiology of disease and options for treatment continue to advance and expand. Such a dichotomy in surgical education necessitates alternative methods of active training.

Seasoned surgeons and clinicians are challenged to develop new forums away from the bedside and the OR to develop basic knowledge in an effort to optimize the limited clinical time for building and honing more complex surgical skills. Textbooks, scientific articles, and didactics can be consolidated into smartphone applications for enhanced accessibility, allowing residents to learn while on the go in the midst of hectic
Seasoned surgeons and clinicians are challenged to develop new forums away from the bedside and the OR to develop basic knowledge in an effort to optimize the limited clinical time for building and honing more complex surgical skills.

rotations. Simulated trainers for practice in laparoscopy, endoscopy, and robotics have been developed to supplement intraoperative hands-on experience and to act as surrogates for the patient-as-teacher relationship. Using simulated training in a variety of clinical settings with associated complications reinforces surgical skills without compromising patient safety. These simulations also provide a controlled teaching environment in which trainees can be objectively evaluated via structured courses. In the wake of today’s information overload, the current generation of practicing surgeons and surgical trainees must take a modernized approach to the challenges of medicine encountered by their predecessors and embrace the shift toward education through technology and simulation.

However, each generation of surgeons has its own learning style, which may influence each group’s affinity for technology as an educational instrument. Millennials, defined as those individuals born between 1982 and 2001, are digital natives who are accustomed to multitasking and the continuous use of digital devices, whereas older generations may be less comfortable with the diffusion of technology. At the same time, each generation is heterogeneous and diverse, and the increasing prominence of technology in surgical education and its potential for individualized learning may be a unifying intergenerational factor.

Gadgets and devices
Advances in computer technology, video cameras, and smartphones play a vital role in clinical medicine and have revolutionized how surgeons care for patients both inside and outside of the OR. Today, trainees of all levels not only participate in the traditional study of textbooks, attend didactic lectures, and learn directly from attending surgeons, they also regularly use handheld devices and computers to access information and engage with colleagues at any time.

The advent of video-assisted procedures, including laparoscopy, endoscopy, and robotics, has expanded the armamentarium of the general surgeon and magnified the number of skills a surgical trainee must master in addition to traditional open techniques. In turn, video recordings of training and intraoperative sessions give residents further exposure to the steps and skills employed in specific operations, augmenting their preparation for the OR and compensating for the decreased amount of time spent therein. Video sessions at national meetings organized by the Society of American Gastrointestinal and Endoscopic Surgeons and the American College of Surgeons attract many trainees and practicing surgeons who are interested in watching and learning new techniques. Online video libraries with content from national conferences and other contributors have also proliferated for easy access to both trainees and advanced surgeons.

Smartphone applications (“apps”) have permeated surgical training, enhancing traditional methods of teaching. A plethora of apps are available on topics ranging from anatomy review to self-assessment question banks. In fact, preparation for the annual resident in-service exam has evolved, as information via apps can be accessed anytime with a smartphone. Trainees can better budget their time by spending a few minutes of free time answering practice questions, studying anatomy, or even logging duty hours—all through smartphone apps. Apps such as Epocrates, UpToDate, Medscape, and others are tools for disseminating current health care information, while TouchSurgery, Truelearn, and SurgQuest allow surgical residents to practice the steps for common procedures or review high-yield facts. A user can browse the latest journal articles, listen to a surgical podcast, consult updated staging guidelines for cancer patients, and even calculate the risk of infection after a hernia repair—all by tapping the screen of a smartphone.

The genre of wearable technology also has found an application in surgical education. Devices developed for assessment include those with physiologic sensor capabilities to monitor and evaluate the impact of stressors on performance during training sessions. Intraoperative teaching via wearable devices such as video cameras allows not only the surgeon and first assistant to view an operation from the primary perspective, but residents and students as well. Wearable
gadgets such as Google Glass have shown promise in education by providing real-time teaching from the wearer’s point of view as well as a heads-up display for reference to imaging or other useful data. Furthermore, virtual interactive presence (VIP) enables skilled surgeons to interact with a trainee in the operative field and give real-time coaching or assistance from a remote location.

Simulation
Since minimally invasive surgery gained traction in the 1980s, surgeons have known that acquiring new surgical skills involves training beyond the traditional Halstedian apprenticeship model of supervised intraoperative learning. The combination of shorter duty hours, along with the need to balance patient safety with resident learning, increases the need for education both inside and outside the OR.

While simulation training cannot replace the traditional apprenticeship model of intraoperative training, simulation experiences allow trainees to learn at their individual pace, and to have the freedom to make mistakes and to learn from those mistakes in a safe environment. Many educators advocate for mandatory simulation training to enhance proficiency before trainees are allowed to perform procedures on patients. A range of simulators have been created and studied, from box simulators and tasks to advanced simulators that mimic a complete surgical procedure. Surgeons, gynecologists, and urologists use the Fundamentals of Laparoscopic Skills (FLS) education modules to acquire and test basic laparoscopic dexterity, while other health care professionals use the Fundamentals of Endoscopic Skills (FES) course to hone upper and lower endoscopic skills. The fields of laparoscopy and endoscopy are continuously evolving with the introduction of single-incision laparoscopic surgery and natural orifice transluminal endoscopic surgery, which also require a dynamic platform of learning and skills practice. The latest simulators include the robotic training console, and formal robotic training courses may soon become standard components of a surgical residency curriculum.

A vast amount of literature describing the efficacy of simulation training modalities is available. Research has shown that early exposure to simulation is critical in surgical training. Incorporation of trauma patient simulators into an intensive trauma boot camp in 2016 was found to significantly increase the overall confidence level of 15 interns with respect to delegation, leadership, crisis resource management principles, and performance of trauma primary and secondary surveys.

Virtual reality is another validated form of simulation training. A systematic review of 31 randomized controlled trials examining simulation training for abdominal laparoscopy found virtual reality training to be superior to video trainers and equal to box trainers in the teaching of laparoscopic skills. In randomized controlled studies, virtual reality simulation has been demonstrated to be effective in other surgical procedures, such as robotic cardiac surgery and urology. In addition, a 2015 randomized controlled trial (n=16) found that four hours of virtual reality simulator training was significantly more efficient than a half day of supervised training on patients using the traditional apprenticeship model. However, virtual reality training is more likely to be successful when it occurs as part of an organized education program with validated performance measures and when practiced at regular intervals rather than consolidated into a single extensive period.

Three-dimensional (3-D) printed models are the next frontier of simulation training. With the advent of 3-D printing, surgical teams can now train with high-fidelity simulation on personalized 3-D models to enable preoperative preparation, optimize operative performance, and teach postoperative care. In neurosurgery, patient-specific 3-D brain models were found to be valuable for preoperative patient illustration, teaching, learning, surgical training, and preoperative planning. Simulation training on patient-derived 3-D models is particularly important.
Since minimally invasive surgery gained traction in the 1980s, surgeons have known that acquiring new surgical skills involves training beyond the traditional Halstedian apprenticeship model of supervised intraoperative learning.

for procedures with decreasing volume, which has led to fewer opportunities for OR training.\textsuperscript{26}

In addition, 3-D models can be valuable for simulation of postoperative care. Following congenital cardiac surgery, patient-specific 3-D models have been used to train intensive care unit (ICU) teams in postoperative care.\textsuperscript{27} In particular, nurses and ancillary staff found 3-D models helpful for successful postoperative critical care handoffs. They also reported a greater understanding of the patient’s operation.

The cost associated with newer forms of simulation training, such as virtual reality simulators and 3-D models, may be burdensome for some training programs. However, a number of training programs have developed low-cost, easy-to-assemble simulation models. For example, inexpensive endoscopy simulators have been developed to facilitate FES skills training. Some cost less than $100 to build using easily obtainable materials and were rated by endoscopy experts as both easy to assemble as well as realistic.\textsuperscript{17,28}

Simulation as a training modality is an intergenerational tool. It can be valuable for independently practicing surgeons as a component of continuing medical education (CME) and as an educational home to acquire new techniques, further refine skills, and maintain proficiency in a safe setting without endangering patients.\textsuperscript{29-31} Postgraduate training courses and surgical simulation centers can provide a valuable venue for practicing surgeons after residency and fellowship training to gain simulation experience. A systematic review of 17 studies found that simulation-based training for practicing physicians demonstrated both immediate and sustained improvements.\textsuperscript{32}

**Telemedicine**

Telemedicine is defined as the use of electronic communication systems to exchange medical information and improve patient health outcomes.\textsuperscript{33} Telemedicine has been available for several decades; in fact, Evans and Schenarts report that the late Michael DeBakey, MD, FACS, used telemedicine in 1965 to guide European surgeons in the performance of open heart surgery.\textsuperscript{34}
The technology boom of the last two decades has made telemedicine significantly more available and its use more widespread in the health care system. Indeed, the American Telemedicine Association reports that more than half of all hospitals in the U.S. use some form of telemedicine.

Telemedicine has transformed the way we learn about surgery. In Dr. Halsted’s time, a surgeon might travel overseas to learn state-of-the-art procedures from the innovators of those techniques. With telementoring—the practice of having an experienced, senior surgeon remotely guide a less experienced, junior surgeon through a procedure—surgeons no longer need to travel to learn about a new operation. As a result, telementoring has gained popularity, especially among physicians in rural or austere environments, as a means to learn new techniques and seek advice from more experienced surgeons.

The clear advantage of telementoring is its natural integration with minimally invasive surgical techniques. For example, Treter and colleagues have described the use of telementoring to instruct surgeons in remote locations how to perform posterior retroperitoneoscopic adrenalectomy, concluding that “cyberspace consultation is safe.”

Teleconferencing also has had a profound effect on surgical education. In trauma surgery, for example, the American Association for the Surgery of Trauma (AAST) hosts monthly grand rounds transmitted via teleconferencing to its many member institutions. These grand rounds cover a multitude of topics pertinent to the care of trauma patients and connect trauma surgeons from across the country to the nation’s leading institutions.

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We are on the brink of transforming surgical education from a one-size-fits-all training paradigm to a system that builds on the strengths of the individual surgeon while helping to address any individual weaknesses.

Looking forward

The future holds an incredible opportunity to harness technology for the education and evaluation of surgeons in an increasingly complex world. Devices, simulators, and telemedicine allow for increased access to surgical information, novel surgical applications, and real-time teaching of surgical techniques. The innovations described in this article have permeated surgical instruction to differing degrees; some, such as smartphones, are widespread, while others, such as 3-D printing and telemedicine, are more nascent. Nonetheless, these advances are changing the way we think and teach. We are on the brink of transforming surgical education from a one-size-fits-all training paradigm to a system that builds on the strengths of the individual surgeon while helping to address any individual weaknesses. As new technologies are created, surgical

REFERENCES (CONTINUED)


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training will continue to adapt and change. To encourage innovation in surgical education is to open new portals for communication, assessment, and progress.

However, the wisdom of the past should continue to inform the present. As certain procedures become less common due to changing disease etiologies and management, young surgeons have much to learn from their older colleagues.38,39 As we train the next generation of surgeons, we must continue to impart these skills and lessons to practicing surgeons to ensure that all members of the profession are prepared to meet today’s patient care challenges.

The rich history and tradition of surgery transcend intergenerational differences in learning styles. While virtual platforms have revolutionized surgical education, we should consider the benefits of in-person coaching and relationship-building. In a changing world, we must safeguard the lessons passed down from every generation and embrace technologies that facilitate the exchange of ideas. ♦

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Exploring the limits of surgeon disclosure:

Where are the boundaries?

Rashna F. Ginwalla, MD, MPH; Alisha D. Reiss, MD; Naveen F. Sangji, MD, MPH; Anne P. Ehlers, MD, MPH; and William H. Ward, MD
Over the last several decades, medical care has undergone a seismic shift toward increasing transparency, disclosure, and an overall focus on patient-centered care. With this change in the patient-physician relationship and the challenge to surgical paternalism by patients and physicians, the traditional boundaries between surgeon and patient also have changed. Increased attention to surgeon fatigue and consequent resident work-hour restrictions has spurred a national conversation about the safety of a surgeon performing elective cases after a busy night on call. An additional concern raised by patients and the media is the practice of concurrent surgery, in which an attending surgeon has two overlapping procedures going at the same time in different operating rooms (ORs), as well as the role of trainee involvement in surgical cases.

Some patient advocates and physicians demand full disclosure of these formerly “private” aspects of a surgeon’s practice, whereas others defer to the individual surgeon’s judgment with the expectation that he or she is guided by principles of professionalism. Given the interest in surgeon disclosure limits among patients, policymakers, and the media, it is clear that if surgeons fail to lead the discussion, third parties will make these decisions for us.

In advance of this year’s Resident and Associate Society of the American College of Surgeons (RAS-ACS) Symposium at Clinical Congress 2016, during which this topic will be discussed and debated, this article describes the controversy over the extent of surgeon disclosure and suggests future directions for study.

Preoperative disclosure enhances patient safety and trust

The significant advances in the provision and delivery of care have changed the face of surgery over the last century, allowing our patients to lead healthier, more productive lives. The surgeon-patient relationship also has evolved from one of paternalism to shared decision making. Given this change, it seems logical that the

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**HIGHLIGHTS**

- Summarizes the issues that will be debated at the RAS-ACS Symposium at Clinical Congress 2016
- Provides details supporting the argument that preoperative disclosures improve patient safety and the surgeon-patient relationship
- Provides details supporting the opposite viewpoint—that disclosures can be detrimental to the surgeon-patient relationship
- Outlines the ACS’ position on this issue
manner in which we obtain surgical consent, which establishes a covenant of trust between us and our patients, would evolve accordingly.

Those of us in training today have never really experienced it, but paternalism was the defining characteristic of the surgeon-patient relationship in the first half of the 20th century. At that time, surgeons routinely made decisions on behalf of their patients without much input from these individuals—something that is clearly out of step with how we practice today. We now practice in the era of patient-centered care in which patients seek to understand all potential treatment options and demand transparency. It is no longer enough to tell patients that we will take good care of them; rather, patients want solid evidence that their providers will deliver positive outcomes.

Patient satisfaction also is now factored into payment and overall quality decisions, further empowering patients to shape the way that health care is delivered in the U.S. As a result, surgeons’ relationships with their patients demand increased transparency.

For example, with the increased attention to physician work hours, many patients now ask their surgeon how much he or she slept before the start of an elective operation. The impact of surgeon sleep deprivation and fatigue on patient care has been at the forefront of discussions regarding patient safety, disclosure, and informed consent since the widely publicized death of Libby Zion in March 1984. Lawyers for the family cited the residents’ sleep deprivation as a factor in Ms. Zion’s death, leading the Accreditation Council for Graduate Medical Education (ACGME) to develop the 80-hour workweek restrictions that took effect in 2003.

Sleep deprivation is known to adversely affect mood and cognition, and its effects are often compared to that of alcohol intoxication with similar impairment of psychomotor function. Studies show an increased risk of complications when sleep-deprived surgeons perform procedures, and 80 percent of patients indicate that they would request a different surgeon if they knew their surgeon had been awake for the last 24 hours.

Beyond factors pertaining to the surgeon who is treating them, patients also want information about the other health care professionals who will be participating in the operation. Recent press coverage about concurrent and overlapping surgeries in the Boston Globe has unleashed a wave of controversy and discussion among physicians and the lay public alike. The role of trainee surgeons in the OR, particularly in concurrent and overlapping operations, is poorly understood by patients and therefore should be addressed head-on and discussed openly by surgeons rather than skimmed over. Disclosing the details of concurrent procedures can lead to an improved relationship between the surgeon and his or her patient, and describing the role of the trainee can often be gratifying to both the trainee and the patient.

Preoperative disclosures and erosion of the physician-patient relationship
Merriam-Webster defines paternalism as “the attitude or actions of a person, organization...that protects people and gives them what they need but does not give them any responsibility or freedom of choice.” Surgical training is designed to hone an individual surgeon’s judgment—to know where, when, and how to wield a scalpel, and how to comprehensively care for a patient throughout the full course of their illness. Most patients do not have this specialized knowledge and, therefore, rely on their surgeon to make decisions for them. While patient autonomy is imperative for shared decision making, it is impossible and impractical for patients to understand the nuances of each decision made by their surgeon, thereby requiring some level of paternalism. As such, patient-centered care and paternalism, practiced correctly, are not necessarily mutually exclusive.
Deeper than the inherent power differential in the physician-patient relationship that can sometimes intimidate patients and take center stage in the media lies the oath that every physician takes before all else, “primum non nocere,” as well as the obligation to be the patient’s advocate. The recognition of our unyielding moral imperative to do the right thing needs to publicly regain its place in our armamentarium of patient care and advocacy.

Regulating and mandating the types of disclosures described in this article not only challenges surgeons’ professional judgment, but such requirements also may lack supporting evidence, as demonstrated by the recent Flexibility in Duty Hour Requirements of Surgical Trainees (FIRST) Trial.20 Karl Y. Bilimoria, MD, MS, FACS, and colleagues showed that residents who were allowed latitude in determining their own work hours within a general limit of 80 hours per week showed no difference in complications or medical errors and demonstrated greater satisfaction with their training than those trainees who were required to strictly adhere to the rules, such as scrubbing out of index cases or handing off unstable patients when their shift ended. Furthermore, providing a cookie-cutter approach to such disclosures negates interpersonal variability in habits and behaviors. For example, some surgeons function well on two to three hours of sleep, while others require eight hours to feel rested.

If legislators enact mandatory disclosure regarding the amount of sleep a surgeon has had before operating, it opens a Pandora’s Box that our health care system is unready to address. Will the government or insurance companies penalize a surgeon for operating after less than six hours of sleep? How will we know if a surgeon actually slept for the six hours they reported? Will the requirements differ for a trauma surgeon operating on a patient who is brought in as an emergency case in the middle of the night or for general surgeon starting a case starting at 4:00 pm on an elective schedule that started at 7:00 am?

Having an operation at an academic training center comes with the understanding that resident will be involved with one’s care. Should surgeons disclose exactly which trainee will be involved in each case; what portion of the procedure the trainee will perform, such as fascial and/or skin closure or peripancreatic dissection for a Whipple; and the resident’s level of training? Extending the sleep and duty hour argument further, should the trainee also disclose whether he or she is at the beginning of their shift or at the end?

Unquestionably, fatigue affects performance. If surgeons cannot be trusted to recuse themselves from operating on a patient for whom they bear responsibility when they know they are compromised or rely on a colleague to assist during times of fatigue, then why stop there? Why not mandate that surgeons disclose the amount of caffeine or nicotine they have had that morning? Why not force surgeons to disclose distractions of a personal nature they might be experiencing, such as divorce, a sick child, or use of medications for atrial fibrillation, diabetes, or depression? What about regulating disclosure of human immunodeficiency virus or hepatitis status? Where will the line be drawn if surgeons are not leading the discussion?

Instead of forcing surgeons to disclose such information to their patients, leaving it up to the individual surgeon’s discretion recognizes that such highly trained individuals have the ability to focus and conduct their best work while overcoming external stressors. Mandatory disclosure will adversely affect an already burdened emergency care system, as surgeons will have to choose between providing emergency care overnight and scheduling daytime elective surgery. This situation may further limit access to timely surgical care, especially for routine cases. Individual surgical departments should take steps to identify at-risk surgeons and work with them accordingly.17 To force a professional to divulge information that is not known to contribute in any significant way to poor outcomes harpoons the very essence of the surgeon-patient relationship.12, 21-23 As stated by the leaders of five professional physician societies:

...government must avoid regulating the content of the individual clinical encounter without a compelling and evidence-based benefit to the patient, a substantial
Mandatory disclosure will adversely affect an already burdened emergency care system, as surgeons will have to choose between providing emergency care overnight and scheduling daytime elective surgery.

public health justification, or both. By reducing health care decisions to a series of mandates lawmakers devalue the patient-physician relationship.24

The ACS’ role
To address the challenges regarding surgeon disclosure limits, the American College of Surgeons (ACS) has facilitated extensive discussion on disclosure and patient consent through statements released by the Board of Regents and via articles published in the Bulletin.25-28

Specifically, the ACS has released statements on the disclosure of a variety of issues, ranging from hepatitis to HIV status, which do not need to be disclosed when universal safety precautions are taken, to the presence of health care industry representatives in the OR, which should be disclosed to patients, and the delegation of parts of an operation.25,29-31

At press time, concurrent surgery was receiving a great deal of scrutiny, and the Senate Finance Committee was investigating the practice.15,32 As a result, the ACS convened a 10-member panel to develop guidelines on this practice.16 The new guidelines, added to the ACS Statements on Principles in April, reiterate that the attending surgeon has primary responsibility for the patient, and although part of the operation may be delegated to “qualified practitioners,” including residents, the “primary attending surgeon’s personal responsibility cannot be delegated” and recommend that the patient be informed of any overlap in operations during which the attending may delegate a part of the operation.25

The College also has published guidelines on the effects of fatigue and methods to mitigate these problems, but the question of disclosure to a patient is not addressed.16 Additionally, duty hour restrictions for trainees, mandated through the ACGME, were meant to alleviate the ill effects of fatigue on trainees and patients alike.9 Although the American Medical Association (AMA) has launched the well-received online training program AMA STEPS Forward—which assists in the identification and prevention of mandatory disclosure—some worry that this may adverse affect an already burdened emergency care system, as surgeons will have to choose between providing emergency care overnight and scheduling daytime elective surgery.

REFERENCES

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REFERENCES (CONTINUED)


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of physician burnout and career-based fatigue—the topic of acute, post-call fatigue and associated patient disclosure is not addressed.33

Where should we go from here?
As we continue discussions regarding surgeon disclosure, it will be increasingly important for surgeons to lead the way. If we do not advocate for ourselves and suggest reasonable parameters for surgeon disclosure, it is inevitable that other stakeholders will develop the rules for us. Because federal intervention in the disclosure issue is suboptimal when compared with the development of guidelines issued by surgical societies, the ACS must continue to amplify our influence in Washington, DC. In light of the recent attention and congressional investigation of concurrent surgical practices, our continued support of the ACS Professional Association political action committee (ACSPA-SurgeonsPAC) remains crucial in communicating with congressional leaders and retaining control over disclosure-related recommendations within our own community. Examples of the efficacy of our investment in the SurgeonsPAC can be found in the repeal of the sustainable growth rate via passage of the Medicare Access and CHIP (Children’s Health Insurance Program) Reauthorization Act of 2015.34

Future policy efforts should focus on developing guidelines for surgeon disclosure rather than creating strict policies, with the caveat that guidelines run the risk of temporally evolving into standards of care, without adequate scrutiny into outcomes. A guideline-driven approach would be similar to guidelines directing patient care—general instructions for improving care that should be adapted and considered on a case-by-case basis. For example, guidelines surrounding concurrent surgery might acknowledge that this practice exists on a spectrum and that banning the practice outright could negatively affect patient care by restricting access to common procedures that can be performed relatively easily. In addition, a guideline-driven approach
would enhance the physician-patient relationship by opening the door to an honest conversation about the circumstances under which each operation will be performed and who will be performing it.

Conclusion
As the practice of medicine and surgery continues to evolve, it is critical that surgeons maintain the bond between physician and patient—the unwritten agreement that we enter into when we agree to accept a person as a patient, to first do no harm, and to uphold and be worthy of the patient’s trust. Although the specific limits of preoperative surgeon disclosure are debatable, it is clear that surgeons owe patients the utmost honesty. Knowing what you do about what happens inside an OR, what would you want your surgeon to disclose if your family member lay on the gurney? And should your surgeon be forced to disclose that information if not asked? This process may be better facilitated by the development of more formal disclosure guidelines.

If recent history has taught us anything, it is that it is essential for surgeon leaders to remain engaged and in front of this evolving surgeon disclosure discussion so that we may continue to hold a primary decision-making role in patient-centered care. If we do not, government agencies and, eventually, insurance companies, will do it for us. Both the RAS-ACS and the College as a whole are well positioned to realize these goals today and in the future. ♦

REFERENCES (CONTINUED)

Statehment on physician-led team-based surgical care

This joint statement from the American College of Surgeons (ACS) and the American Society of Anesthesiologists was approved at the June 3–4 meeting of the ACS Board of Regents.

Perioperative care is focused on consistent, efficient, safe, high-quality, patient-centered medical care, with timely access and full functional recovery being the ultimate goal.

Optimal care is best provided by a coordinated multidisciplinary team recognizing each member’s expertise. Coordinated surgical care provides best outcomes, lowers costs, and increases patient satisfaction.

Several models of coordinated care involving the patient’s individual surgeon, anesthesiologists, primary care physicians, hospitalists, medical specialists, nurses, and other health care professionals are in development. Consistency, high reliability, and appropriate communications and handoffs remain opportunities for improvement. The evolution to optimal physician-led team-based care will improve outcomes and lower costs.

Looking forward, redesigned perioperative care models should be based on what is best for the patient, individual institutions, and practitioners and should include the following principles:

• Patient involvement with shared decision making, patient education and engagement, and alignment of expectations, including risk-based informed consent.

• Risk-stratification, risk-reduction, and optimization of patients prior to surgery, including medication reconciliation.

• Standardized adherence to high reliability and safety standards.

• Evidence-based care to reduce variability and perioperative complications.

• Effective coordination of care among all health care providers involved in the perioperative care of the patient.

Roles and responsibilities of specialists are developed locally based on population needs and the training and skills of physicians involved. Models must recognize the primary responsibility of the operative surgeon, which includes confirming the presence of a surgical condition, verifying the need for surgical treatment, and directing or partnering with others for perioperative care.

Optimal physician-led team-based care includes a number of health care professionals, including the operating surgeon(s), anesthesiologists, hospitalists, specialty physicians, nurses, technicians, and other health care professionals. The contributions of each discipline will vary by practice and local environment. We believe this approach is best developed by the national medical specialty organizations and medical professions working together. ♦

V101 No 8 BULLETIN American College of Surgeons
As the number of nonphysician practitioners (NPPs) hired by physicians’ offices continues to grow, it is important to understand Medicare’s incident to billing policies. NPPs who provide patient services and report these services to Medicare using their national provider identification (NPI) number are reimbursed at 85 percent of the Medicare physician fee schedule (MPFS). NPPs who provide patient services incident to surgical services can report these services to Medicare under the surgeon’s NPI, and the surgical practice is paid 100 percent of the MPFS.

This column describes incident to services in detail, including Medicare requirements for billing and examples of how surgeons can successfully bill.

What are incident to services?
Incident to services are services rendered to a patient by a provider other than the physician treating the patient more broadly, that are an integral, although incidental, part of the patient’s normal course of diagnosis or treatment of an injury or illness. These services are billed as Medicare Part B services, as if the original physician personally provided the care using that physician’s NPI number. For example, if a nurse practitioner treats a simple fracture for an established patient with no new health care problems and the incident to requirements have been met, that service may be billed under the supervising physician’s NPI, and the practice would receive 100 percent of the MPFS. Incident to services might include evaluation and management services, cast setting, minor surgery, and X-ray review, among others.

Who are NPPs?
NPPs are health care professionals who are licensed to provide specific health care services. For Medicare purposes, the term includes the following: nurse practitioners and clinical nurse specialists, certified nurse midwives, physician assistants (PAs), audiologists, nurse anesthetists, clinical social workers, physical and occupational therapists, and registered dieticians/nutrition professionals.* These practitioners must have a valid employment arrangement with the billing physician; in other words, staff who provide the services must represent an expense to the physician or to the legal entity that is billing for services. As a condition of Medicare payment, the 2016 MPFS final rule clarifies that auxiliary personnel who provide incident to services must comply with all applicable federal and state laws, and cannot be excluded by the Office of Inspector General from Medicare, Medicaid, and all other federally funded health care programs.

What are the requirements to bill incident to services?
For the purposes of billing Medicare, incident to services are defined as the following:†

- An integral, although incidental, part of the physician’s professional service
- Commonly rendered without charge or included in the physician’s bill
- Of a type that are commonly furnished in physicians’ offices or clinics
- Furnished by the physician or by auxiliary personnel under the physician’s direct supervision

The patient record also should document the essential requirements for incident to services. The surgeon must have provided a direct, personal, and professional service that

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initiated a course of treatment, and the surgeon must perform subsequent services to demonstrate continuing active participation in and management of the course of treatment.‡

Integral, although incidental, services are those that are part of the normal course of treatment of a diagnosis or illness. Care provided to a new patient or an established patient with a new health care condition may not be billed as an incident to physician service. In this case, the practice should report that service under the NPP’s NPI number.

CMS defines direct supervision as the physician being present in the office suite and immediately available so as to provide assistance and direction throughout the time the health care service is performed. Incident to services may not be billed if the supervising surgeon is available by telephone or is elsewhere in the building.† Furthermore, in the 2016 MPFS, CMS clarifies that in cases

where the supervising physician is someone other than the referring, ordering, or treating practitioner, only the supervising physician may bill Medicare for the incident to service.

Incident to services must also be provided in a nonhospital/non-skilled nursing facility, such as a surgeon’s office or a surgeon-directed clinic setting. If a surgical group joins a hospital as part of an off-campus outpatient hospital, even if the group is in the same location it was in before joining the hospital, incident to services can no longer be reported to Medicare. In this situation, the place of service is no longer the office, but a hospital outpatient department.

What are examples of incident to services and appropriate billing?

Scenario 1
The surgical patient has an established diagnosis and plan of care with no new problems. Incident to requirements have been met and a properly credentialed PA reads an X ray for the patient at the surgeon’s office. This service may be billed under the supervising surgeon’s NPI number.

Scenario 2
The surgical patient has an established diagnosis and plan of care, but has developed a new health care problem. Incident to requirements have been met and a properly credentialed PA evaluates and treats the patient for the new problem. This service must be billed under the PA’s NPI number.

Scenario 3
The surgical patient has an established diagnosis and plan of care, but has a new problem. Incident to requirements have been met and a properly credentialed PA evaluates the patient with the surgeon available in the office suite. The documentation supports a face-to-face encounter between the surgeon and patient, and the surgeon initiates a course of treatment. This service (evaluation of the patient) may be billed under the supervising surgeon’s NPI number.

Scenario 4
The surgical patient has an established diagnosis and plan of care with no new problems. A PA evaluates the patient in a hospital outpatient department setting. This service must be billed under the PA’s NPI number. ♦

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Surgery in Maryland:
Guidelines for navigating health care reform

by Mark R. Katlic, MD, FACS

Few surgeons outside Maryland know that for decades we have been unique in the nation in terms of our health care financing. This system changed even further in 2014, when the Centers for Medicare & Medicaid Services (CMS) approved a new model aimed at both lowering costs and improving quality. Early results have been so promising that CMS will be encouraged to partner with other states in implementing similar reforms—reforms that will profoundly affect the practice of surgery. Surgeons across America: pay attention.

History of the Maryland waiver
In the late 1970s Maryland hospitals and government officials negotiated a waiver to Medicare’s traditional payment model. Rates for hospital services would be established by an independent commission—the Health Services Cost Review Commission (HSCRC)—and all payors, private and public alike, would pay these rates. This system had the advantage of distributing the costs of uncompensated care and medical education as well as eliminating cost shifting among payors; the growth of per-admission costs was contained.

Although the system was initially salutary, in recent years this system has been ineffective in preventing overall per capita Medicare costs from exceeding those of most other states. Maryland hospitals have not been immune to the pressure to increase the volume of services provided. Also, Medicare pays higher rates for these services in Maryland than other states that fall under national prospective payment systems for inpatient and outpatient care. Maryland, threatened with losing its waiver, successfully presented CMS with a new model.

Adoption of a new model
Maryland’s plan, with its guarantee to CMS to both save costs and improve quality, changed hospital reimbursement. On January 1, 2014, the state established a hospital global budget program. All payors in aggregate pay each hospital or hospital system a fixed amount for inpatient and outpatient services that calendar year. The amount is adjusted for achievement of quality measures but not for utilization or hospital costs. This mandates that hospitals focus on value rather than volume and on population health rather than on episodic care.

As a state, Maryland promised to contain the growth of per capita hospital costs to 3.58 percent—the 10-year compound annual growth rate of the per capita gross state product—over the next five years. We will limit the annual growth of Medicare’s costs to 0.5 percent less than the actual national growth rate, thus saving Medicare a minimum $330 million over five years. Entitlements to beneficiaries do not change.

In terms of quality measures, Maryland will reduce readmission rates for Medicare patients to the national mean and will reduce 65 potentially preventable conditions associated with hospital care, conditions that overlap with Maryland Hospital Acquired Conditions (MHACs), by 30 percent over five years.1 Although each hospital had the option of continuing a modified fee-for-service system,
all 41 hospitals in Maryland, influenced by the HSCRC’s carrot-and-stick inducements, chose the global budget model. Thus the additional agreement to move almost all of the state’s aggregate hospital revenue into global budgets in five years has nearly been satisfied already.

**Early results of the new model**

After the first year, per capita hospital costs for all payors increased by 1.47 percent, more than 2 percentage points lower than the promised growth rate of 3.58 percent. This occurred despite 21 percent growth in Medicaid enrollment due to the Affordable Care Act. Maryland per capita hospital costs decreased by 1.08 percent, already saving $116 million of the promised five-year $330 million, as these costs increased nationally by 1.07 percent. In the quality arena, potentially preventable conditions decreased 26.3 percent despite worse results in central line- and urinary catheter-related infections. Although still worse than the national rate, Maryland decreased the gap in the readmission rate from 1.2 percent to 1.0 percent in one year.² Maryland has promised to reduce costs and improve quality of all health care in the state, not just hospital services. In 2014 these per capita costs did decrease by 0.64 percent, an improvement driven by reductions in hospital expenditures. We still must improve our patient-experience scores, which remain among the worst in the country.

**Implications for surgery**

One might think that a hospital would desire less surgery under a global budget model. Operations are costly, so fewer operations translates to more money left in the bucket at the end of the year. However, providing fewer services also means a smaller global budget the next time it is calculated for one’s hospital. Thus, hospitals still want to provide a high volume of surgical procedures, but with fewer complications, postoperative days in the intensive care unit, and readmissions. Surgery done well, therefore, is even more important in Maryland now, since even small improvements in outcomes can have an enormous effect on the bottom line.

The occurrence of adverse events must be scrupulously tracked and reported to the state, with millions of dollars of both rewards and penalties at stake. Many of the observed-versus-expected events are under the influence of surgery: postoperative hemorrhage, surgical site infection, venous thromboembolism, central line-related infection, urinary catheter-related infection, pressure sores, and more. Quality has always been paramount to surgeons—few of us sleep well when our patients suffer a complication—and we now have an even more enthusiastic partner in hospital administration.

Patient satisfaction, difficult to reliably measure and more difficult to influence, has become a multimillion dollar asset or liability.

**Suggestions for surgeons and hospitals**

Few states have the 40-year experience with a centralized rate-setting commission, so the full Maryland model may be impractical or delayed in other states. Still, it is important to avoid complacency, as the pressure from CMS to change will continue to grow. In the laboratory that is Maryland, the experiment appears to be working. Even if the costs to CMS remained equal to those of other states, the predictability on January 1 of those total state costs is highly desirable to the
Patient satisfaction, difficult to reliably measure and more difficult to influence, has become a multimillion dollar asset or liability.

agency. The incentives for quality can be instituted with or without the global budget scheme, and probably will be. Surgeons and hospitals that prepare today will appear prescient when these changes occur.

The following are suggestions for surgeons and hospitals anticipating global budgets.

• Optimize quality. Hospitals and surgeons must align incentives towards this end. For example, compensation incentives should move rapidly away from pure productivity (for example, relative value units, collections, and so on) and toward quality-based measures such as observed-to-expected mortality, complications, length of stay, compliance with evidence-based order sets, and others. This mandates the ability to measure and report these factors by individual surgeon or group (see “Leverage IT” later in this article). Departments should appoint a surgery quality officer to drive these changes—ours at Sinai Hospital reviews surgery-related MHACs and oversees our resident quality projects (see “Leverage residents” later in this article); this can be a career path for a surgeon.

• Operate in the lowest cost setting. It is often surgeon inertia, efficiency, or comfort that inhibits moving cases to outpatient surgery centers or moving divisions to a different hospital within a system; this cannot be tolerated when a hospital can no longer pass along the higher cost of the tertiary care setting. At Lifebridge Health System, for example, we moved the bariatric surgery division from Sinai Hospital to our smaller sister institution, Northwest Hospital.

• Become indispensable. Hospitals need to backfill the move to outpatient centers with growth in complex elective cases, such as cancer resection. Niche specialization can be developed and marketed (for example, Sinai has an International Limb Lengthening Orthopedic group and a Center for Geriatric Surgery).

• Leverage information technology (IT). For the reasons above, it will be an enormous advantage for hospitals and groups to know exact cost data for various settings as well as individual quality data by surgeon. Evidence-based order sets and decision support in an electronic health record facilitate best practices. The seemingly high up-front expenditure will pay dividends under nearly any future model.

• Leverage residents. With encouragement and guidance by program directors and faculty, residents are in a powerful front-line position to effect change. Every surgery resident should be part of a quality improvement project (at Sinai our residents developed and led five team projects targeting venous thromboembolism, blood utilization, trauma transitions of care, enhanced recovery, and patient safety curriculum; they have educated other departments and their order sets are used by all specialties). This experience also prepares them for their future.

• Embrace multidisciplinary care. Although not the sharpest arrow in a surgeon’s quiver, the openness to help from others will be increasingly important. Many readmissions after an operation are actually for “medical” reasons such as congestive heart failure. Early multidisciplinary involvement, including that of social service, will ultimately lower cost and improve quality.

• Become geriatric surgeons. A large proportion of complications, readmissions, and increased length of stay occur in the older surgical patients. A good place to start is perusal of the best practices documents.
So far, the experiment appears to be working, with decreased costs and increased quality, and there will therefore be pressure on other states to adopt some or all of these dramatic changes.

**Embrace population health.** Even further from core surgical focus, the management of chronic conditions in a population, such as that of a geographic area or the summation of all primary care provider panels of patients, will be so important for hospitals and systems that surgeons must help. At minimum, a surgeon can notify the family physician when the surgeon identifies hypertension, hyperglycemia, smoking, lack of recommended mammogram or colonoscopy, or another potential risk.

**Satisfy patients.** Traditionally, surgeons would not thrive if they provided less-than-excellent service to patients and referring physicians, but this service, measured and publicly reported, is now the basis for direct and significant financial incentives and penalties. Technical excellence is insufficient; a surgeon is scrutinized for access to appointments, how close a patient is seen to his or her appointment time, alacrity with calling the patient with lab results, and more.

**Conclusion**
Maryland has become a laboratory for health care reform, including all-payer rate setting and global hospital budgets overseen by a central state commission. So far, the experiment appears to be working, with decreased costs and increased quality, and therefore there will be pressure on other states to adopt some or all of these dramatic changes. Surgeons will be affected and those who are prescient and prepare will thrive in this new world.

**REFERENCES**
by Matthew H. G. Katz, MD, FACS; Syed A. Ahmad, MD, FACS; and Judy C. Boughey, MD, FACS

Pancreatic cancer is the fourth-most common cause of cancer-related death in the U.S. and is predicted to soon be the third-leading cause. Surgical resection with pancreatectomy has historically been viewed as offering the only chance for cure. However, achieving negative margins at surgery can be difficult, with positive surgical margins found in as many as 90 percent of resected specimens.1 Unfortunately, most patients develop recurrent cancer within two to five years of pancreatectomy due to the growth and dissemination of cancer cells following surgery, both at the operative field and distant sites.

Systemic chemotherapy is classically delivered postoperatively with the goal of reducing the number of cancer cells throughout the body. Chemotherapy definitively prolongs survival following pancreatectomy, but only marginally.2 In contrast, the value of postoperative radiation, with the goal of reducing any residual cancer cells left within the surgical field, is controversial. Importantly, only about one-half of patients who should receive either chemotherapy and/or radiation therapy following surgery actually do. Nonetheless, pancreatectomy followed by systemic chemotherapy remains the standard of care worldwide, and the role of additional postoperative radiation therapy is being evaluated in a large phase III trial.3

Positive effects of preoperative therapy

The delivery of chemotherapy and/or radiation in the preoperative setting (before surgical resection, instead of after it) has been hypothesized to improve both rates of margin-negative resection and survival. Two studies pave the way for preoperative therapy in pancreatic cancer patients

The delivery of chemotherapy and/or radiation in the preoperative setting (before surgical resection, instead of after it) has been hypothesized to improve both rates of margin-negative resection and survival.
sufficient to facilitate a margin-negative resection.

- Patients with rapidly progressive cancers may be spared a presumably futile operation if they are found to develop metastases during systemic therapy before surgery.

Several single-arm studies have shown that both chemotherapy and radiation can generally be delivered safely before pancreatectomy. Although the outcomes associated with this general strategy have not been shown to be superior to the standard “surgery first” regimen, preoperative therapy has gained popularity nationwide both for patients with resectable (low-risk for margin-positive resection) and borderline resectable (high-risk for margin-positive resection) pancreatic cancers. Encouraging data using newer systemic chemotherapy and radiation regimens have increased interest in this strategy. Indeed, two of the three treatment trials for patients with non-metastatic pancreatic cancer that are being conducted within the National Clinical Trials Network (NCTN) have been designed to evaluate and optimize preoperative therapy regimens for patients with localized pancreatic cancer.

**Trials under way**

Until recently, systemic therapy options in pancreatic cancer have been limited and relatively ineffective, thus limiting opportunities for preoperative therapy. Now with...
Now with two multi-agent regimens available (mFOLFIRINOX and gemcitabine plus nab-paclitaxel) that are more active against pancreatic cancer, systemic therapy can be considered in the preoperative setting. Two multi-agent regimens available (mFOLFIRINOX and gemcitabine plus nab-paclitaxel) that are more active against pancreatic cancer, systemic therapy can be considered in the preoperative setting. Southwest Oncology Group (SWOG) Trial 1505 (see Figure 1, page 58) will test these two regimens in the perioperative setting for patients with resectable tumors. This intergroup study, which has been activated and is open to all NCTN sites, randomizes patients with resectable pancreatic cancer to three cycles of systemic FOLFIRINOX or three cycles of gemcitabine plus nab-paclitaxel. Patients without progression then undergo surgical resection followed by three cycles of the same regimen following surgery. The primary objective of this study is to pick the superior regimen with respect to overall survival. The Alliance for Clinical Trials in Oncology A021501 trial (see Figure 2, this page), which is expected to activate across NCTN sites in late summer 2016, will compare two more intensive preoperative therapy regimens for patients with more advanced disease. Patients with borderline resectable pancreatic cancer will be randomized to receive either a systemic regimen of modified FOLFIRINOX for eight cycles, or a combination regimen of seven cycles of modified FOLFIRINOX followed by a five-day radiation regimen using either stereotactic body radiation therapy or hypofractionated image-guided radiation therapy. The chemotherapy component of this trial can be delivered at affiliated treatment sites as long as the incorporated quality control measures can be maintained. The regimens used in this trial are anticipated to improve upon the results of the recently published Alliance A021101 pilot study, in which 68 percent of patients with borderline resectable pancreatic cancer underwent pancreatectomy following FOLFIRINOX and conventional chemoradiation, and 93 percent of operations were associated with microscopically negative margins. Like the SWOG trial, the primary objective of the study is to determine the superior regimen with respect to overall survival.
The Alliance for Clinical Trials in Oncology A021501 trial, which is expected to activate across NCTN sites in early summer 2016, will compare two more intensive preoperative therapy regimens for patients with more advanced disease.

All patients with localized pancreatic cancer should be considered for enrollment in one of these two noncompeting trials. The SWOG study specifically is for patients with technically resectable cancers—cancers that meet the following radiographic criteria:

- No involvement of the celiac artery, common hepatic artery, or superior mesenteric artery
- No involvement, or < 180° interface between tumor and vessel wall, of the portal vein or superior mesenteric vein; and patent portal vein/splenic vein confluence
- No evidence of metastatic disease

In contrast, the Alliance study is specifically for patients with borderline resectable cancers defined by one or more of the following radiographic criteria:

- A circumferential tumor-vessel interface (TVI) with superior mesenteric/portal vein ≥ 180°
- TVI with superior mesenteric artery < 180°
- Short-segment TVI with hepatic artery of any degree

**Surgeon/patient participation needed**

The ability of these trials to advance the management of pancreatic cancer will depend in large part upon the enthusiastic participation of surgeons and their patients with their multidisciplinary teams. For questions and additional information, contact Matthew H. G. Katz at mhgkatz@mdanderson.org or Syed A. Ahmad at ahmadsy@uc.edu.

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Legislative activities and informed consent

by Kathleen Heneghan, PhD, RN, PN-C, and Kevin R. Walter

This month’s column highlights two important benefits of membership in the American College of Surgeons (ACS)—support for advocacy-related issues that are key to ACS members and an automated informed consent process. This column describes both of these benefits, specifically the efforts that the Division of Advocacy and Health Policy (DAHP), Washington, DC, carry out on the behalf of Fellows, and information on the College’s robust informed consent resources.

DAHP protects surgeons, surgical patients
The DAHP directs the College’s advocacy activities on behalf of practicing surgeons and surgical patients at both the federal and state levels on all aspects of socioeconomic, legislative, and regulatory issues that affect surgery.

Regulatory issues
The College plays many interconnected roles in advocating on behalf of ACS members. For example, the Regulatory Affairs team in June provided comments on the Centers for Medicare & Medicaid Services (CMS) proposed rule to implement the Medicare Access and CHIP (Children’s Health Insurance Program) Reauthorization Act (MACRA) of 2015. Once finalized, the rule will establish the roadmaps for participation in the Merit-based Incentive Payment System, which will replace the current fee-for-service program, and alternative payment models. In addition to providing comments on the MACRA proposed rule, the College’s Regulatory Affairs team is meeting with CMS officials to ensure that members will be able to successfully participate in the new Medicare payment programs.

Legislative activities
MACRA was made possible in large part because of the advocacy efforts of the College’s Legislative Affairs team, which led a nearly 10-year campaign to repeal the sustainable growth rate (SGR) formula previously used to calculate Medicare physician payments. An ACS-led coalition of national surgical associations built bipartisan congressional support to pass MACRA in 2015, which included the SGR repeal. During the decade-long battle, the College played a leading role in blocking proposed Medicare payment cuts of more than 30 percent that would have resulted from the SGR formula.

The ACS Legislative Affairs team also is focused on other key policy initiatives, including the following: blocking CMS from disclosing raw Medicare physician claims data to third parties to protect surgeons from inaccurate performance ratings; requiring a study to designate general surgery health professional shortage areas; and removing barriers to colorectal cancer screenings. More information about the College’s legislative priorities is available in the July issue of the Bulletin.

State issues
State Affairs staff helps ACS chapters organize grassroots campaigns to advance state initiatives, such as tanning bed restrictions, expanded bariatric surgery coverage, and reciprocity between states allowing volunteer health care practitioners to provide assistance in another state during an emergency. Current examples of these initiatives include the Kansas Chapter of the ACS, which in 2016 successfully supported passage of a new law banning the use of indoor tanning devices by minors; the passage of the Uniform Emergency Volunteer Health Practitioners Act in Georgia; and other initiatives including the prevention of drastic increases in medical liability costs in New York, repeal of an ambulatory surgery tax in Connecticut, and maintaining the motorcycle helmet law in Tennessee.
Practice management
In addition to advocating before federal and state lawmakers and government agencies, the DAHP also helps members navigate practice management and coding issues through resources such as the ACS Coding Hotline and via regional workshops, which are offered throughout the year. As CMS finalizes the rule to implement MACRA, the College will provide the details surgeons need to know to protect their Medicare payments.

How to get involved
Ideas for getting involved in the College’s advocacy and health policy initiatives include the following:

• Become familiar with key legislative issues affecting surgeons and surgical patients at facs.org/advocacy
• Contact your members of Congress and respond to ACS calls to action through SurgeonsVoice at surgeonsvoice.org (ACS member ID and last name required)
• Participate in the annual Leadership & Advocacy Summit as well as your local ACS chapter’s state advocacy day
• Build relationships with your lawmakers by attending in-district meetings and/or town halls or by inviting them to visit your surgical practice. Follow the steps at facs.org/advocacy/participate/surgeonsvoice/grassroots/guide

• Learn about the ACS Professional Association’s political action committee at surgeonspac.org

Automated informed consent process
Surgeons are responsible for obtaining informed consent from their patients and recognize it as a critical step in the course of care. Informed consent serves as a communication tool for ensuring that patients understand the realities and ramifications of treatment, but it also can help to reduce medical errors by outlining the details of scheduled procedures. At the same time, many surgeons concede that, as important as they are, efforts in this regard often fall short. Sometimes, obtaining informed consent is viewed as a document signing event, in particular when the signature form is either highly generic or simple fill-in-the-blank forms that either lack specific details or are at a level beyond the understanding of the average patient and their family.

Recognizing these inadequacies, health care payors and accreditation organizations are paying closer attention to the viability of today’s approach to informed consent. CMS and The Joint Commission are both clear in their expectations as to what entails an appropriate informed consent process (see Table 1, page 63, and Table 2, page 64). The CMS’ guidelines related to informing patients of the participation of different qualified medical providers and their respective roles is in precise alignment with the recently updated ACS Statements on Principles, which will be published in full in the September issue of the Bulletin.

Patients also are playing a more active role in the informed consent process and are more willing to participate in decisions regarding their health care. A survey of 800 people conducted by the Foundation for Informed Medical Decisions found that more than 80 percent of the respondents felt that informed patients made better medical decisions.

Accurate and useful content also is a patient safety issue. The Agency for Healthcare Research and Quality (AHRQ) has identified missed and incomplete or not fully comprehended informed consent as a significant patient safety opportunity. The AHRQ states that better informed patients are less likely to experience medical errors, providing another layer of protection. Patient-centered communication also
A description of the proposed operation, including the anesthesia to be used.

The indications for the proposed procedure.

Material risks and benefits for the patient related to the surgery and anesthesia, including the likelihood of each, based on the available clinical evidence, as informed by the responsible practitioner’s clinical judgment. Material risks could include risks with a high degree of likelihood but a low degree of severity, as well as those with a very low degree of likelihood but high degree of severity.

Treatment alternatives, including the attendant material risks and benefits.

The probable consequences of declining recommended or alternative therapies.

Who will conduct the surgical intervention and administer the anesthesia.

Whether physicians other than the operating practitioner, including but not limited to residents, will be performing important tasks related to the surgery, in accordance with the hospital’s policies. Important surgical tasks include: opening and closing, dissecting tissue, removing tissue, harvesting grafts, transplanting tissue, administering anesthesia, implanting devices, and placing invasive lines.

- For operations in which residents will perform important parts of the procedure, surgeon and patients are encouraged to discuss the following:
  - That it is anticipated that physicians who are in approved postgraduate residency training programs will perform portions of the operation, based on their availability and level of competence.
  - That it will be decided at the time of the procedure which residents will participate and their manner of participation, and that this will depend on the availability of residents with the necessary competence; the knowledge the attending surgeon has of the resident’s skill set; and the patient’s condition.
  - That residents performing surgical tasks will be under the supervision of the attending surgeon.
  - Whether, based on the resident’s level of competence, the attending surgeon will be physically absent from the same operating room.

For operations in which residents will perform important parts of the procedure, surgeon and patients are encouraged to discuss the following:

- That residents performing surgical tasks will be under the supervision of the attending surgeon.
- Whether, based on the resident’s level of competence, the attending surgeon will be physically absent from the same operating room.
- That it is anticipated that physicians who are in approved postgraduate residency training programs will perform portions of the operation, based on their availability and level of competence.
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- That residents performing surgical tasks will be under the supervision of the attending surgeon.
- Whether, based on the resident’s level of competence, the attending surgeon will be physically absent from the same operating room.

Note: A “moonlighting” resident or fellow is a postgraduate medical trainee who is practicing independently, outside the scope of his/her residency training program and would be treated as a physician within the scope of the privileges granted by the hospital.

Whether, as permitted by state law, qualified medical practitioners who are not physicians will perform important parts of the operation or administer the anesthesia, and if so, the types of tasks each type of practitioner will carry out; and that such practitioners will be performing only tasks within their scope of practice for which they have been granted privileges by the hospital.

Survey reveals informed consent inadequacies

To obtain a clearer picture of where the surgical community stands in terms of its approach to the informed consent process, the ACS surveyed members in 2006 about their informed consent practices. Of the 1,183 surgeon and nurse respondents to the Patients as Partners in Surgical Care Survey, only 47 percent of physicians reported using printed consent materials. Of that number, just 15 percent met the specifications set forth in ACS and American Medical Association (AMA) guidelines, with gaps across the board. Among the survey respondents with consent forms in place, for example, only 41 percent covered procedural risks, 38 percent included information on diagnoses, and 23 percent presented the patient’s likely prognosis.

The ACS has long promoted the importance of comprehensive informed consent. In fact, the DAHP recommends that surgeons address additional concerns not recommended by the AMA, such as advancing a detailed and specific set of information, including diagnosis, prognosis, purpose, preparation, options, and benefits. Additionally, the College has designed a set of 10 questions that may be presented to patients...
A complete informed consent process includes a discussion of the following elements:

- The nature of the proposed care, treatment, services, medications, interventions, or procedures
- Potential benefits, risks, or side effects, including potential problems that might occur during recuperation
- The likelihood of achieving goals
- Reasonable alternatives
- The relevant risks, benefits, and side effects related to alternatives, including the possible results of not receiving care, treatment, and services
- When indicated, any limitations on the confidentiality of information learned from the patient

Vendor partnership
To address the issues raised in the survey, in 2006 the nine-member ACS Patient Education Committee reviewed multiple vendors of digital informed consents and selected Taylor Healthcare’s iMedConsent application. That software tool is available to ACS members on a 30-day free trial basis. Purchase and installation are offered at a 30 percent discount to ACS members. Details may be found on the ACS website under “Member Benefits” (facs.org/members/members.html), which links to “Procedure Specific Informed Consent.”

Developed by a surgeon, the iMedConsent system offers a standardized approach to receiving consent and makes available more than 3,500 procedure-specific documents across 30 specialties. The application also features an image library that allows surgeons to not only inform their patients about what to expect, but show them as well. Pre- and postoperative patient education materials, including drug monographs and follow-up care instructions, are essential components of the system. The automated tool, including procedure-specific consent forms and patient education materials, presents a complete picture of an individual case, including diagnosis, surgery, and pre- and post-procedure considerations.

The ACS selected the iMedConsent application for a number of reasons. The breadth of procedure-specific informed consent documents was key to this decision. In addition, the committee was impressed that the iMedConsent application has been deployed for 12 years throughout the 158 Department of Veterans Affairs (VA) medical centers as the cornerstone of the VA’s Electronic Support for Patient Decisions initiative.

The automated system also addresses concerns shared by nurses in the Patients as Partners in Surgical Care Survey. Nurses noted that once patients hear the word “surgery,” they tend to forget everything else, making it challenging for patients to comprehend specific details about their case. Nurses also noted a degree of uncertainty about how to respond when patients ask specific questions about their planned procedure after the surgeon has conducted the informed consent process. The automated informed consent application, on the other hand, allows nurses to access a detailed, procedure-specific consent document and provide clarification for the patient.

The iMedConsent application is updated regularly with new
procedures. For example, as new risks associated with computed tomography (CT) scans are revealed, procedure risks are updated to reflect current opinion. In addition, the application is regularly updated to reflect new regulatory language so that surgeons are always in compliance with federal and state statutes and guidelines. This capability is significant in an environment that is changing rapidly. In January 2009, for instance, the updated Joint Commission Universal Protocol for Preventing Wrong Site, Wrong Procedure, and Wrong Person Surgery took effect. As part of The Joint Commission’s overall 2009 National Patient Safety Goals, the protocol states that accredited institutions have “an accurately completed and signed procedure consent form...available and accurately matched to the patients,” both in the preoperative area for verification and again in the operating room for the time-out. Procedure-specific informed consents were a critical component identified in preventing wrong site surgery.

The updated ACS template available within the iMedConsent application automatically populates the time-out guidelines and includes pre- and postoperative instruction, which is particularly helpful when more than 65 percent of all procedures in community hospitals are now done on an outpatient basis. This system supports efficiency, not only for patients and their families but also the medical team, as it ensures all forms are available as needed. An automated approach can simplify and streamline the informed process and provides the added value of bolstering the role of patient as partner and enhancing patient safety.

REFERENCES

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“If she dies, you die.” This was the statement that welcomed Amilu Stewart, MD, FACS, to the Colorado Springs, CO, emergency room, where she worked as a senior surgeon. The comment came from two sons whose mother had been admitted with a gangrenous gallbladder and needed surgery. “Now that is stress,” Dr. Stewart said.

In a June 2016 interview, Dr. Stewart admitted that she is able to laugh about the situation now, but at the time, it was not so funny. “Both men were a foot taller than me and were quite serious, even lifting me up by the elbows when they said it. I have often wondered if I would have been treated differently by them had I been a male surgeon.”

Despite these and other challenges facing a woman entering the surgical profession in the mid-20th century, Dr. Stewart found her career to be rewarding. She not only healed many patients but also helped to set a precedent for young women looking to begin their own medical careers.

The American College of Surgeons (ACS) Foundation proudly highlights her as a Mayne Heritage Society (MHS) member. The MHS recognizes Fellows who have provided a bequest or other planned gift of any size to the College through their estate plan.

Undeterred by cultural norms
From an early age, Dr. Stewart ignored the bias against women entering the medical profession. Raised on a Colorado ranch, Dr. Stewart knew as a teenager that she wanted to pursue a career in medicine, but she grew up when that goal was largely an unrealistic aspiration for a woman. “I was encouraged to pursue one of three careers: teacher, secretary, or housewife. In fact, my father was very against me even thinking about pursuing a career as a physician.”

Undeterred, Dr. Stewart applied to Jefferson Medical College, Philadelphia, PA (now the Sidney Kimmel Medical College at Thomas Jefferson University), where she was employed as a technician in the surgical lab of open heart surgery pioneer, John H. Gibbons, MD, FACS. She was accepted into medical school in 1961, one year after completing her undergraduate studies. At that time, she also was a young wife and the mother of a one-month-old baby.

“Jefferson Medical College had been a male-only school for

Amilu Stewart, MD, FACS: Silencing the skeptics
by Sarah B. Klein, MPA
125 years and had just decided to admit women. The percentage of women in medical school at that time was 6 percent. I was interviewed by three psychiatrists as there were no role models ahead of me, and they didn’t know what to do with me,” Dr. Stewart noted.

Dr. Stewart and seven other women were the first of their gender to graduate from Jefferson Medical College in 1965.* “I had a great education at Jefferson, and even had my second child as a junior medical student. I was back at school one week after delivering my child, as I would have lost my place in the class,” she said.

Moving back to Colorado for a rotating internship, she initially sought to apply for an obstetrics-gynecology residency at the University of Colorado, Denver; however, the chair of the department told her they had never had a woman resident and were not ready for one. She then spoke to William R. Waddell, MD, FACS, chair of surgery, who also said he had never had a woman resident but was willing to try it. “I have been forever grateful for the opportunity Dr. Waddell gave me.” Thanks to this opportunity, Dr. Stewart finished a residency in general surgery and a fellowship in transplantation surgery, assisting in some of the first liver transplant operations, under the tutelage of the pioneering transplant surgeon Thomas Starlz, MD, PhD, FACS.

**Trailblazing career**

After her residency and two years as director of the emergency department at Washington Adventist Hospital, Takoma Park, MD, Dr. Stewart moved to Colorado Springs to start a surgical practice. As the only woman physician in the city for her first five years in Colorado Springs, winning over the referring family physicians was no easy task—although once they saw how well trained Dr. Stewart was, they eventually accepted her. Dr. Stewart’s notable career also highlights her dedication to the profession and patients. She served in academia at the University of Colorado Health Sciences Center, where she was instructor in surgery and assistant clinical professor of surgery (1972–1990). In addition, Dr. Stewart was a member of the surgical staff at both Penrose-St. Francis Health Services and Memorial Health Systems (1972–2008) in Colorado Springs. At Penrose, Dr. Stewart also held the position of chief, department

Dr. Stewart with her husband, Bill Perry, at the 2016 Jacobson Award Dinner

of surgery (1995). At present, she serves on the admissions committee at the University of Colorado Health Sciences Center, Colorado Springs.

Dr. Stewart has been involved in many surgical associations, and her leadership roles have included ACS Second Vice-President; Chair, Executive Committee of the ACS Board of Governors; and President, Western Surgical Association.

Giving back

Although officially retired, Dr. Stewart still provides patient care at Peak Vista’s Volunteer Specialty Center, helping to fill a gap in care for those patients who do not have access to surgeons. According to a Peak Vista volunteerism award nomination, “Dr. Stewart improves the lives of her patients by always caring for them with compassion, integrity, and honesty. She is a loyal, respected member of Peak Vista and serves as a role model for others.”

A Fellow since 1974, Dr. Stewart stated that Fellowship in the ACS and the surgical profession have been so personally rewarding to her that she chose to reciprocate through her involvement in ACS philanthropic programs. She was a member of the ACS Development Committee (now the ACS Foundation) and is the current Chair of the ACS Foundation Board of Directors.

Dr. Stewart’s commitment to volunteerism has led to a number of awards, including the 2011 Distinguished Alumni Award from Sidney Kimmel Medical College; the 2014 Colorado Community Health Network Volunteer Clinician Award; and the ACS Distinguished Service Award (DSA), the College’s highest honor. She received the DSA for her “dedicated service to the ACS and to the profession of surgery as a gifted and dedicated community surgeon and an active volunteer and leader.”

Dr. Stewart continues to give back, not just with her time but with her philanthropic support as well. She makes annual donations and is leaving a philanthropic legacy by including the ACS in her will. “I was a recipient of a tuition scholarship in medical school, which has made me a strong champion for philanthropy. My definition of a good donor is one who gives an annual gift and also commits to a planned gift through his or her estate. It is personally heartwarming for me to see the wonderful results in the next generation of surgeons who are now the recipients of this circle of giving.”

If you are interested in learning how you can join Dr. Stewart in planning for a future gift to the ACS, contact Shane Hollett, Executive Director, ACS Foundation, at 312-202-5506.


New Patient Blood Management Certification aimed at eliminating unnecessary transfusions

by Carlos A. Pellegrini, MD, FACS, FRCSI(Hon), FRCS(Hon), FRCSEd(Hon)

The Joint Commission and AABB (formerly the American Association of Blood Banks) have co-developed a new, voluntary Patient Blood Management (PBM) Certification based on the AABB’s Standards for a Patient Blood Management Program.

This program is the first recertification product that The Joint Commission has developed with an external organization. It provides a third-party evaluation of PBM programs. Certification is valid for two years, and the additional program is for hospitals and critical access hospitals currently accredited by The Joint Commission.

Purpose of PBM

PBM is an evidence-based, multidisciplinary program, which factors in all aspects of evaluation and clinical management surrounding the transfusion process, such as the application of appropriate indications, minimization of blood loss, and optimization of patient red cell mass.

The goals of the PBM certification program are to assist hospitals in implementing practices that eliminate unnecessary transfusions and adverse outcomes, ensure blood components are available for patients who truly need them, and create possible cost savings.

In October 2012, The Joint Commission and the American Medical Association convened an Overuse Summit, at which blood transfusion was listed as the most overused procedure in U.S. hospitals, costing billions of dollars. Transfusion also is the most common procedure performed during hospitalization; in fact, 11 percent of all hospital stays involving a medical procedure include a blood transfusion.

According to the U.S. Department of Health and Human Services, in “The 2011 National Blood Collection and Utilization Survey Report,” approximately 14 million allogeneic red cell units are transfused annually at a cost of more than $3 billion to hospitals, and 59 percent of red blood cell transfusions are inappropriate.*

Benefits of implementation

By implementing a PBM certification program, hospitals can achieve the following:

After implementing the PBM certification program, some hospitals have seen a 25 percent reduction in hospital stays for non-transfused patients over transfused patients, and the implementation of transfusion guidelines has been associated with a 47 percent reduction in the odds of death—as well as a 50 percent decrease in hospitalization costs after cardiac surgery.

Examples of standards that are part of the PBM include the following:

- Professional competency, which requires a hospital to define credentials for those health care practitioners who order or transfuse blood
- Clinical guidelines, which requires the hospital to establish and define evidence-based PBM protocols for its population
- Perioperative and pre-intervention patient care, which details requirements such as the maximum surgical blood ordering schedule and pre-procedure anemia management
- Quality metrics and reporting requirements

For a free trial edition of the standards for the PBM certification program or an application, e-mail qualityhospitals@jointcommission.org. For PBM resources, visit www.aabb.org/pbm or www.jointcommission.org/certification/patient_blood_management_certification.aspx.

Disclaimer
The thoughts and opinions expressed in this column are solely those of Dr. Pellegrini and do not necessarily reflect those of The Joint Commission or the American College of Surgeons.
The rise of the smombies and fall of the pedestrians

by Richard J. Fantus, MD, FACS

Last month, this column addressed the cultural phenomena of “smombies”—short for smartphone zombies—and distracted pedestrian injuries resulting from collisions with motor vehicles.* Many of us have seen smombies in action, and some of us, at one time or another, have been guilty of being one. Unfortunately, walking head down with eyes focused on a smartphone screen is a recipe for disaster. In last month’s column, the disturbing 10-year upward trend in pedestrian injuries and fatalities from texting was discussed.* This month, we look at the pedestrian case fatality rate over the last several National Trauma Data Bank® (NTDB®) dataset years.

A growing problem
According to a preliminary press release from the annual Governors Highway Safety Association Spotlight on Highway Safety Report, the number of pedestrians killed in traffic crashes in 2015—the year under investigation at press time—will likely increase by 10 percent from the prior year.† This projected increase will be the largest annual increase reported. Pedestrians currently account for a larger share of all motor vehicle crash-related deaths, numbering around 15 percent, up from 11 percent just a decade ago.‡

The number of pedestrian fatalities recorded for the first half of 2015 varies widely from state to state. A total of 21 states reported decreases, 26 states along with the District of Columbia reported increases, while three states reported no change.

Pedestrian fatalities tended to occur in larger states with large urban areas such as California, Florida, Texas, and New York. These four states accounted for 42 percent of all pedestrian fatalities but are home to only 33 percent of the population.‡ In 2014, 72 percent of all pedestrian fatalities occurred in the dark.‡

Contributing factors
Many factors may have contributed to this spike in pedestrian fatalities. Motor vehicle use has increased as a result of lower gas prices and an improved

NTDB DATA POINTS

FIGURE 1. PEDESTRIAN CASE FATALITY RATE BY YEAR

NTDB findings
To examine the trend of pedestrian fatalities from motor vehicle traffic crashes in the NTDB research dataset admission years 2009–2014, medical records were searched using the International Classification of Diseases, Ninth Revision, Clinical Modification codes. Specifically searched were records that contained the following external cause of injury code (E-code): E814.7 (Motor vehicle traffic accident involving collision with pedestrian, injuring pedestrian). A total of 152,551 records were found for this six-year period; of these injured patients, 11,188 died. The motor vehicle-related pedestrian fatality rate by year is displayed in Figure 1, this page.

An upward trend in the pedestrian case fatality rate is demonstrated over the six-year period from 2009 to 2014. The one-year, 10 percent spike mentioned previously is projected to appear in the 2015 data. Will the preliminary 2015 data bear out? With an increase in the number of petextrians (texting pedestrians) roaming the streets, that is a good possibility. We may see a day when the rise of the smombies results in the fall of the pedestrians.

Throughout the year, we will highlight these data through brief monthly reports published in the Bulletin. The NTDB Annual Report 2015 is available on the ACS website at facs.org/quality-programs/trauma/ntdb. In addition, information is available on our website about how to obtain NTDB data for more detailed study. If you are interested in submitting your trauma center’s data, contact Melanie L. Neal, Manager, NTDB, at mneal@facs.org.

Acknowledgment
Statistical support for this article was provided by Chrystal Caden-Price, Data Analyst, NTDB.
Louis C. Argenta, MD, FACS, received the 2016 Jacobson Innovation Award of the American College of Surgeons (ACS) at a dinner in his honor June 3 in Chicago, IL. The Jacobson Award honors Dr. Argenta, professor and chairman emeritus, department of plastic and reconstructive surgery, Wake Forest University School of Medicine, Winston-Salem, NC, for his work with Wake Forest bioengineer Michael Morykwas, PhD, in the development of vacuum-assisted closure (VAC), a paradigm-changing approach to treating difficult wounds and burns. The prestigious Jacobson Innovation Award honors living surgeons who have contributed to the development of a new device or technique in any field of surgery and is made possible through a gift from Joan and Julius H. Jacobson II, MD, FACS. Dr. Jacobson is a general vascular surgeon known for his pioneering work in microsurgery.

VAC, which uses negative pressure wound therapy, has received wide recognition as the most important advancement in wound healing in the last 25 years. By clinically applying a controlled vacuum to a wound through a special device, the body is induced to heal spontaneously. VAC has prevented an estimated 1 million amputations and has been used in the treatment of more than 14 million patients worldwide. U.S. military medical personnel have used the treatment for almost all battlefield injuries in Iraq and Afghanistan, dramatically reducing wound infection and complications and significantly improving the outcomes of wounded soldiers.

Dr. Argenta is an internationally recognized expert in mechanobiology—the application of controlled mechanical energy to induce biological changes in living tissue—and its applications in clinical medicine. He helped to develop and popularize the surgical technique of tissue expansion to generate living tissue for reconstructive surgery. Tissue expansion is now used throughout the world for complicated breast, facial, and...
Dr. Argenta is an internationally recognized expert in mechanobiology—the application of controlled mechanical energy to induce biological changes in living tissue—and its applications in clinical medicine.

In 1995, Dr. Argenta and Lisa Renee David, MD, FACS, recognized that children who remained in one position while sleeping on their backs developed skull deformities due to the mechanical force placed on the malleable neonatal skull. Drs. Argenta and David demonstrated that helmet therapy, rather than a surgical procedure, could correct deformities because there was not a true bony fusion in the skull. Dr. Argenta’s work has allowed infants with skull deformities to develop normally while avoiding major cranial surgery.

Dr. Argenta has received numerous awards for his work, including the 2015 Wake Forest University Medallion of Merit Award, the 2013 American Association of Plastic Surgeons Achievement Award for Clinical Research, and the 2012 Plastic Surgery Foundation Outstanding Achievement Award.

Dr. Argenta and his wife Ginger have eight children, three of whom work in medicine. Read an ACS press release announcing the 2016 Jacobson Innovation Award at facs.org/media/press-releases/2016/argenta060616.

For a list of previous Jacobson Innovation Award winners, visit the ACS website at facs.org/about-acs/governance/acs-committees/honors-committee/jacobson-list.
The American College of Surgeons (ACS) sadly notes the passing of Chad Anthony Rubin, MD, FACS, who died of cancer at the age of 52 on July 3 in Columbia, SC. Patricia L. Turner, MD, FACS, Director of the ACS Division of Member Services, remembers Dr. Rubin as a dedicated surgeon and College volunteer and a friend. “Chad was a kind and generous person who gave the College his time, his considerable expertise on surgery and on matters of health policy and advocacy, and his positive energy and friendship,” Dr. Turner said.

Dr. Rubin was a consummate ACS volunteer who served as ACS Governor-at-Large for the state of South Carolina, 2010–2016, as well as in a number of other high-profile positions. Most recently he served as Chair of the ACS General Surgery Coding and Reimbursement Committee, as an Executive Board Member of the ACS Professional Association political action committee (2011–2014), and as Chair of the Board of Governors’ Health Policy and Advocacy Workgroup (2015). He also served as President of the South Carolina Chapter (2008–2010), an ACS Representative in the American Medical Association House of Delegates (2005–2011), and Chair of the ACS Committee on Young Surgeons (2004–2005).

“Dr. Rubin was an incredible leader and advocate for surgeons and surgical patients,” said Christian Shalgian, Director, ACS Division of Advocacy and Health Policy. “He will truly be missed.”

Dr. Rubin earned his medical degree at Southern Illinois Medical School, Springfield, and completed his surgical residency at Wake Forest Baptist Medical Center, Winston-Salem, NC. He worked the last three years as a general surgeon for Providence Hospital, Columbia. In May, the hospital inducted Dr. Rubin into the prestigious Society of St. Luke, which recognizes physicians for distinguished service.

“He was an extraordinary surgeon in private practice in South Carolina where he did all general and vascular surgery and a super-smart volunteer in many capacities for us over the years,” Dr. Turner added. “Most importantly, he was a kind and thoughtful person who was a joy to know.”

Dr. Rubin is survived by his husband, Charles Michael Sandlin, as well as three siblings, a nephew, and a niece. View an online obituary for Dr. Rubin at thesouthern.com/news/local/obituaries/dr-chad-anthony-rubin/article_c46a90df-a6b2-504b-b34d-9d87ae2c7a7a.html.
AMA HOD approves ACS-sponsored resolution on mass casualty bleeding control

The American Medical Association’s (AMA) House of Delegates (HOD), at its June meeting in Chicago, IL, approved a resolution introduced by the American College of Surgeons (ACS) and other medical societies to train more professional first responders and civilian immediate responders to mass casualty events in the essential techniques of bleeding control.

The AMA resolution calls for training more police officers, firefighters, and laypeople in bleeding control and for the placement of bleeding control kits, containing tourniquets, pressure bandages, hemostatic dressings, and gloves, with first responders. These efforts will enlarge the pool of first responders who can assist victims of mass casualty events.

Delegates overwhelmingly supported the adoption of this resolution, which was introduced on the heels of the deadliest mass shooting in U.S. history at the Pulse nightclub in Orlando, FL, on June 12.

“Active shooter events have occurred in 40 out of 50 states and the District of Columbia,” states the resolution, resulting in hundreds of deaths and catastrophic injuries to survivors.

Rooted in Hartford Consensus recommendations
This new AMA policy upholds the recommendations of the Hartford Consensus™. Convened by the ACS, the Hartford Consensus represents the deliberations of the Joint Committee to Create a National Policy to Enhance Survivability from Intentional Mass Casualty and Active Shooter Events. The group’s guiding principle is that “no one should die from uncontrolled bleeding.”

The Hartford Consensus calls for providing law enforcement officers with the training and equipment needed to act before emergency medical services (EMS) personnel arrive and providing EMS professionals with quicker access to the wounded. The Hartford Consensus also encourages training civilian bystanders to act as immediate responders. This element of the Hartford Consensus is at the heart of the “Stop the Bleed” campaign launched by the U.S. Department of Homeland Security through the National Security Council.

“This new policy moves this important initiative forward in terms of our development of a training program for the public, not just health care professionals, so that civilians can learn how to act as immediate responders and save lives,” said Lenworth M. Jacobs, Jr., MD, MPH, FACS, Chair of the Hartford Consensus and director of the Trauma Institute at Hartford Hospital, CT. “We already know from a national public opinion poll published in the Journal of the American College of Surgeons that members of the public are willing to be trained—along with law enforcement and emergency medical responders—to accept this important responsibility.”

Dr. Jacobs pointed out that a general public empowered to act to stop bleeding might have saved lives in the wake of the July 14 event in Nice, France, when a truck rammed into a crowd celebrating Bastille Day.

View the poll results at facs.org/media/press-releases/jacs/hartford0316. More complete coverage of the AMA HOD will be published in the September issue of the Bulletin. ♦
ACS-AEI Postgraduate Course focuses on simulation in surgical education

Register by September 1 for the ninth Annual American College of Surgeons Accredited Education Institutes (ACS-AEI) Postgraduate Course, Perfect Practice Makes Perfect, September 16–17, at Beth Israel Deaconess Medical Center (BIDMC), Boston, MA.

The first day of the course will take place at the Westin Copley Place Hotel and will feature presentations from BIDMC and Harvard Medical School faculty on a variety of timely, simulation-based education topics, including debriefing techniques, designing simulation scenarios, instituting a surgery boot camp, using simulation for team training in the operating room (OR), and becoming familiar with the ACS/Association for Surgical Education Medical Student Simulation-Based Surgical Skills Curriculum. The second day of the course, at the Carl J. Shapiro Skills Center at BIDMC, will feature interactive workshops on creating immersive teaching environments; developing low-cost, high-fidelity simulation models; and simulating a mock OR crisis.

In addition, participants will have ample opportunities to network with other AEI representatives and ACS-AEI program staff. The ACS-AEIs are designed to educate and train practicing surgeons, surgical residents, medical students, and members of the surgical team using simulation-based education.

Visit the ACS website at facs.org/education/accreditation/aei/pgcourse to view the agenda, register for the course, and reserve a hotel room at a special rate.

For more information about the meeting or the AEI Program, contact Cathy Wojcik, Administrator, Program for Accreditation of Education Institutes, at cwojcik@facs.org. ♦

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The Governors act as liaisons between the Board of Regents and the Fellows and serve as a clearinghouse for the Regents on general issues. At present, 274 individuals serve on the American College of Surgeons (ACS) Board of Governors (B/G), including 147 Governors-at-Large, representing each U.S. state and Canadian province; 83 specialty Governors, representing surgical associations and societies; and 44 international Governors. These numbers include the Governor from the newest chapter, Trinidad and Tobago. Three new specialty society Governors will take office at Clinical Congress 2016 from the following organizations: the American Society of Maxillofacial Surgeons, the International Society for Minimally Invasive Cardiothoracic Surgery, and the Society of Black Academic Surgeons.

The B/G Executive Committee meets regularly via conference call. This past June, the Executive Committee held the second annual strategic planning retreat in Chicago, IL, during which committee members evaluated B/G future plans. The Executive Committee also hosted three New Governor Orientations: one webinar in December, one in January, and a face-to-face meeting at the April Leadership Summit in Washington, DC. Governors’ responsibilities include the following:

- Attend meetings and events
  - Attend the spring Leadership Summit (spring meeting attendance is not required for international Governors, although they are welcome)
  - Participate in B/G meetings, Convocation, and Annual Business Meeting of Members at the Clinical Congress
  - Attend chapter or specialty society meetings

- Communicate across all strata of the College
  - Provide bidirectional communication between the B/G and constituents
  - Provide reports to chapter or specialty society

- Welcome and engage new Initiates/Fellows from the Governor’s area/organization into the ACS
- Promote ACS Fellowship in state and specialty societies
- Participate in B/G activities
  - Actively participate in a minimum of one B/G Workgroup
  - Complete Annual Survey
  - Participate in local Committee on Applicants meetings and interviews
  - Be an active participant in the Board of Governors online community site

Pillar updates
Following is an update on the activities of the B/G Pillars and their respective workgroups.

The Governors are aligned along five pillars according to the mission of the ACS.
Advocacy and Health Policy Pillar
Susan K. Mosier, MD, FACS, Pillar Lead

The Advocacy and Health Policy Pillar consists of two workgroups and has representation on several committees. Both workgroups continue to align closely with the Division of Advocacy and Health Policy to better coordinate efforts.

Coalition Workgroup
Shelly D. Timmons, MD, FACS, Chair (2015–2017)
Nicole S. Gibran, MD, FACS, Vice-Chair (2015–2016)

The members of the Coalition Workgroup contributed to the final ACS statement on concurrent surgery, which was added to the ACS Statements on Principles. The group has had several conference calls to identify issues for in-depth analysis, such as merit-based incentive programs and surgical training and credentialing over the course of a career.

Health Policy and Advocacy Workgroup
Scot B. Glasberg, MD, FACS, Chair (2015–2016)
Amalia Cochran, MD, FACS, Vice-Chair (2015–2017)

The members of the Health Policy and Advocacy Workgroup have gone through a similar process and have identified the following issues: (1) workforce shortage of general surgeons; (2) bills defining policy and regulations for out-of-network plans; (3) the changing practice environment, with surgeons moving from private practice to hospital employment; and (4) videotaping of surgical procedures.

• Board of Governors Committee seats:
  – Legislative Committee: James Goldszer, MD, FACS (2013–2016)

Communication Pillar
James W. Fleshman, Jr., MD, FACS, FASCRS, Pillar Lead

The Communication Pillar has advanced an important initiative in 2015–2016: the B/G newsletter. The Cutting Edge: News and Notes from the Board of Governors is now in its seventh edition. Past editions of the newsletter can be found on the Publications page and B/G Resource page on the ACS website at facs.org/about-acs/governance/board-of-governors/resources.

Newsletter Workgroup
Michael Sarap, MD, FACS, Chair (2013–2016)
Russell J. Nauta, MD, FACS, Vice-Chair (2014–2016)

The members of the Newsletter Workgroup have produced The Cutting Edge, which will become a fully electronic, mobile-friendly newsletter by fall 2016 (see Figure 1, this page). Newsletter stories focus on surgical history, College events and products, human interest subjects, Governor profiles, and coding tips.

Survey Workgroup
Mark W. Puls, MD, FACS, Chair (2013–2016)
David J. Welsh, MD, FACS, Vice-Chair (2014–2016)

The members of the Survey Workgroup have completed
the 2016 Board of Governors annual survey. Topics discussed in this survey include chapter issues/concerns, acute care general surgery, gun violence, and ACS advocacy.

New this year is a separate survey for the International Governors, the purpose of which is to identify the issues facing surgeons outside the U.S. and Canada.

Results of both surveys are expected to be published on the B/G Resources Web page in late 2016 at facs.org/about-acs/governance/board-of-governors/resources.

Representative to ACS website—Bryan K. Richmond, MD, MBA, FACS

Representatives to ACS Bulletin and NewsScope—G. Thomas Shires, MD, FACS, and Peter A. Andreone, MD, FACS

Education Pillar

Daniel L. Dent, MD, FACS, Pillar Lead

As a result of the work of the Education Pillar, the ACS has advanced the following initiatives in 2015–2016:

Made improvements to the ACS MyCME Web page

Developed new patient education materials that are easier to access and order for chapter and individual use

Posted four new educational modules revolving around different issues in surgical training on the B/G Resources page

Continuing Education Workgroup

William S. Richardson, MD, FACS, Chair (2015–2016)
Randy J. Woods, MD, FACS, Vice-Chair (2015–2016)

The members of the Continuing Education Workgroup have pursued efforts with the Division of Education to enhance the MyCME page of the ACS website. The goal is to make the MyCME page easier to navigate. Workgroup members also are exploring opportunities to use the ACS Communities and have identified ways to make the College’s educational offerings, such as past Clinical Congress webcasts, easier to search and access.

Patient Education Workgroup

Terry Sarantou, MD, FACS, Chair (2014–2016)
Dennis H. Kraus, MD, FACS, Vice-Chair (2015–2016)

The Patient Education Workgroup is analyzing last year’s survey results for publication in ACS NewsScope and for posting on ACS Communities. This workgroup also is developing a presentation and toolkit for chapters on available patient education materials. The presentation and instructions to order the kit will be available on a special Patient Resource page of the ACS website. The workgroup anticipates the College will soon be able to offer YouTube videos of various patient education resources.

Members of this workgroup are planning to participate in the Chapter Speed Networking Session at the Clinical Congress.

Surgical Training Workgroup

Fred A. Luchette, MD, FACS, Chair (2013–2016)
David H. Berger, MD, FACS, Vice-Chair (2015–2017)

The members of the Surgical Training Workgroup are working toward completion of two products:

A standardized letter of recommendation for applicants to surgery training programs, which has been shared with the leadership of the Association of Program Directors in Surgery and the Association for Surgical Education. Both societies have returned modest changes, which have been incorporated into a final draft. At press time, the letter was expected to be available for Program Directors and Faculty as early as summer 2016.

Four online education modules have been developed to assist educators with faculty development: (1) Teaching Millennials, (2) Giving Constructive Feedback, (3) Intraoperative Teaching, and (4) Clinical Teaching: The Teachable Moment. These
modules are available under the B/G resource page.

• Board of Governors Committee seats:

  - Committee on Resident Education—Antonio M. Pavia, MD, FACS (2013–2016)
  - Committee on Medical Student Education—Mary L. Brandt, MD, FACS (2015–2016)
  - Committee on Patient Education—Dennis H. Kraus, MD, FACS (2013–2016)
  - Committee on Continuous Professional Development—Charles Bridges, MD, FACS (2013–2017)
  - Clinical Congress Program Committee—Daniel L. Dent, MD, FACS (2013–2016), and David A. Spain, MD, FACS (2013–2016)
  - Committee on Emerging Surgical Technology and Education—Joann Lohr, MD, FACS (2013–2017)

**Member Services Pillar**

**Francis D. Ferdinand, MD, FACS, Pillar Lead**

In the last year, the Member Services Pillar has helped to strengthen chapters by updating resources and creating a chapter performance metric. The pillar also conducted extensive outreach for this year’s Surgical Volunteerism and Humanitarian Awards.

**Chapter Activities Domestic Workgroup**

S. Rob Todd, MD, FACS, FCCM, Chair (2014–2016)
Frank T. Padberg, Jr., MD, FACS, Vice-Chair (2014–2016)

The members of the Chapter Activities Domestic Workgroup started two initiatives: the Resident and Associate Society of the ACS (RAS-ACS) Representative Initiative and the Chapter Dashboard Initiative. The goal of the former is to have a RAS-ACS representative on every domestic chapter council to facilitate the development of ideas for programs, projects, and activities that are attractive to residents and surgeons who have recently entered practice. The goal of the latter is to design a visual representation of the health of the chapter. The dashboard will include such indicators of chapter viability as finances, membership, advocacy, and website.

In addition, the workgroup has accomplished the following:

• The *Chapter Guidebook* has been updated and methods for distribution to specific audiences are being investigated.

• A revised Annual Report form is in the works and will be used as a key source of chapter metrics.

• This workgroup has suggested several questions for this year’s B/G Annual Survey on the topic of chapters.

**Chapter Activities International Workgroup**

Jamal Hoballah, MD, FACS, Chair (2015–2016)
(Jorge) Esteban Foianini, MD, FACS, Vice-Chair (2015–2016)

The Chapter Activities International Workgroup has established communities for four international regions as a first step toward creating individual International Chapter Communities. Short videos on the value of being an International Fellow have been created, and international chapters may use them as tools for recruiting new Fellows. Also of interest, the European chapters sponsored a regional meeting in June 2016 in Lisbon, Portugal.

**Surgical Volunteerism and Humanitarian Awards Workgroup**

Frank W. Sellke, MD, FACS, Chair (2015–2017)
Maureen A. Killackey, MD, FACS, Vice-Chair (2015–2016)

The members of the Surgical Volunteerism and Humanitarian Awards Workgroup tested a new nomination site in December 2015 and opened it to traffic in January 2016. Outreach through the ACS Communities, the *Bulletin*, military Governors, and Advisory Councils was aimed at increasing awareness of these awards.
and resulted in the receipt of a historically high number of nominations (39). The workgroup has selected five recipients to be honored at the B/G’s dinner at Clinical Congress 2016.

- Board of Governors Committee seats:
  - ACS Committee on Diversity Issues—Kenneth B. Simon, MD, FACS (2015–2018)
  - Young Fellows Association (YFA)—Shoaib I. Sheikh, MB, BS, FACS (2013–2016)
  - Resident/Associate Society—Glen A. Franklin, MD, FACS (2013–2018)
  - International Relations Committee—Katsuhiko Yanaga, MD, PhD, FACS (2015–2016)

**Quality, Research, and Optimal Patient Care Pillar**

**Diana L. Farmer, MD, FACS, Pillar Lead**

The Quality Pillar has advanced the following initiatives in 2015–2016:

- Addressed the topic of burnout in surgeons
- Produced several panels on timely topics for this year’s Clinical Congress, including Strategies for the Resident and Surgeon Facing Burnout, American College of Surgeons and the Electronic Health Record, and Onboarding for Surgeons: Preparation for Practice Life

**Best Practices Workgroup**

Joseph P. Minei, MD, FACS, Chair (2013–2016)
Brian S. Harbrecht, MD, FACS, Vice-Chair (2013–2016)

- Guidelines have been completed on postoperative ileus, which will be published in a pamphlet format
- Workgroup members are currently updating the ACS National Surgical Quality Improvement Program surgical site infection prevention guidelines and are developing guidelines on management of postoperative fever

**Physician Competency and Health Workgroup**

David J. Welsh, MD, FACS, Chair (2015–2016)
Reid Adams, MD, FACS, Vice-Chair (2015–2017)

This workgroup is considering future initiatives centered on the following topics: the impaired surgeon; the disruptive surgeon; healthy lifestyles; environmental hazards and the operating room, including ergonomics, radiation, and blood-borne infections; crisis hotline for surgeons; and coaching. Three subcommittees are exploring the following issues: ergonomics, wellness, and the disruptive surgeon. The workgroup also is considering collaboration with the ACS Advisory Council for Rural Surgery and others to address the issues of suicide and wellness. A comprehensive, continually updated Web page listing wellness and burnout resources by state is planned for the ACS website.

**Surgical Care Delivery Workgroup**

Mika N. Sinanan, MD, PhD, FACS, Chair (2015–2017)
Kimberly A. Davis, MD, FACS, Vice-Chair (2015–2016)

The Surgical Care Delivery Workgroup comprises the following four subcommittees that are engaged in the following activities:

- The Surgeon Workforce Subcommittee has developed the Onboarding Checklist for Surgeons that was published in the July Bulletin and posted as a resource on the B/G and YFA Web pages. A Clinical Congress Town Hall session, Onboarding for Surgeons: Preparation for Practice Life, also is being planned.
- The Patient Access to Surgical Care Subcommittee has been reviewing and summarizing recent surveys
published in ACS NewsScope and posted on ACS Communities on the topic. They also plan to recap the results of past surveys for presentation at a Clinical Congress Panel Session, Universal Access to Surgery: The Good, Bad, and Ugly.

• The Electronic Health Record (EHR) Subcommittee has been in preliminary discussions with vendors regarding an EHR solution for U.S. Fellows who are concerned about meaningful use, disruption of physician workflow, and the ability to extract relevant quality data. They are proposing a Clinical Congress session, Transparency of EMR (electronic medical record): Pros and Cons, in collaboration with the ACS EMR Committee.

• The Ambulatory Surgery Subcommittee is exploring various topics to focus future efforts.

• Board of Governors Committee seats:
  – Committee on Perioperative Care—Mika N. Sinanan, MD, FACS (2013–2016)
  – Committee on Cancer—Helen A. Pass, MD, FACS (2014–2016)
  – Committee on Trauma—Christine S. Cocanour, MD, FACS (2015–2018)

The Committee to Study the Fiscal Affairs of the College, chaired by Steven C. Stain, MD, FACS, B/G Secretary, continues to review and monitor the fiscal health of the College.

Go to the Board of Governors homepage on the ACS website at facs.org/about-acs/governance/board-of-governors for a rotating series that highlights several Governors, including their roles and projects, as well as the personal satisfaction that comes from serving in this capacity.

We hope this update on the Board of Governors structure and activities is useful and welcome your comments at governors@facs.org. ♦
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Chapter news

by Jennifer Connelly, CAE

South Dakota Chapter hosts joint meeting with North Dakota

The South Dakota Chapter of the American College of Surgeons (ACS) hosted its 64th annual meeting and 17th combined South Dakota/North Dakota Chapter Meeting April 21–23 at the Watertown Event Center. The meeting kicked off with a social event at the Terry Redlin Art Center on Thursday evening hosted by Edwin S. Gerrish, MD, FACS, Prairie Lakes Health Care Corporation, Watertown.

The 26 presentations of the scientific sessions involved six residents and three medical students. Representing the College were ACS President J. David Richardson, MD, FACS, and Christian Shalgian, Director, ACS Division of Advocacy and Health Policy, who both presented updates on College activities. The invited guest speaker, John A. Weigelt, MD, DVM, FACS, recipient of the 2015 ACS Distinguished Service Award, gave two scientific presentations. Entertainment at the annual banquet dinner was provided by the chapter’s own Kirke Wheeler, MD, FACS, before he left the next morning on a medical mission to the Dominican Republic.

Brendan Feehan, a third-year medical student at Sanford School of Medicine, Rapid City, SD, received the 2016 Chester B. McVay, MD, Award from John H. Lee, MD, FACS, President of the South Dakota Chapter, after his presentation. The South Dakota Chapter established the award in 1989 in memory of Dr. McVay, a renowned general surgeon in Yankton, SD. A committee annually selects a Sanford student for the award based on the student’s clinical or research surgical paper.

The North Dakota Chapter will host the next combined chapter meeting April 28–29, 2017, in Fargo.

Northern California Chapter presents inaugural Thomas R. Russell, MD, FACS, Resident Research Award

The Northern California Chapter of the College (NCCACS) hosted its annual Scientific Meeting...
April 29–30 at the Claremont Hotel, Berkeley, CA. The meeting began with the 2016 NCCACS Surgical Trainee Research Paper competition, organized by David T. Cooke, MD, FACS. A receptive and enthusiastic audience responded to five abstracts selected from approximately 30 submissions; volunteer judges scored the presentations. The winner of the competition, Hakan Orbay, MD, PhD, a resident at the University of California (UC), Davis, received the inaugural Thomas R. Russell, MD, FACS, Resident Research Award at a luncheon on April 30—a highlight of the meeting. Dr. Russell had been an active member and supporter of the NCCACS, including serving as Chapter President. His daughter Jackie, a veterinary student at UC Davis, was in attendance for the award presentation.

David Spain, MD, FACS, NCCACS President, was the presiding officer at the collegial President’s Dinner.

The program featured a number of local and national leaders of the ACS. A plenary session titled Wellness and Resiliency for the Surgeon featured talks on burnout and its detrimental effects for surgeons (Mickey Trockel, MD, clinical assistant professor, psychiatry and behavioral sciences, Stanford Medicine), resiliency for the surgeon (Julie A. Freischlag, MD, FACS, Past-Chair, ACS Board of Regents) and the importance of surgeon participation in the hospital environment, as well as at the regional and national levels (Adella M. Garland, MD, FACS, Santa Clara Valley Medical Center, San Jose).

A session on colorectal surgery included Cindy J. Kin, MD, FACS, assistant professor of general surgery, Stanford University Medical Center, who discussed advances in colorectal surgery; Julie Thacker, MD, FACS, Duke University, Durham, NC, who described the experience of implementation of enhanced recovery after surgery (ERAS) programs and its effects on the ACS National Surgical Quality Improvement Program (ACS NSQIP®), and Ryan M. Green, MD, PhD, FACS, Medical Anesthesia Consultants, Walnut Creek, CA, who discussed implementation of an ERAS program from the anesthesiologist’s perspective.

A third session emphasized achieving quality in surgery, with presentations by Mary Hawn, MD, FACS, chair, department of surgery, Stanford University School of Medicine, (Surgeons Leading Quality); Gregory J. Jurkovich, MD, FACS, professor and vice-chairman, department of surgery, UC Davis Health System, Sacramento (Surgical M and M: Personal Responsibility vs. System Protection from Error) and Christina Maser, MD, FACS, University of California San Francisco (UCSF) Fresno, (A Surgeon’s Guide to Thyroid Nodules).

Mary C. McCarthy, MD, FACS, ACS Second Vice-President-Elect, gave a presentation on the value of College membership. Gregory Victorino, MD, FACS, Committee on Trauma (COT) Region IX Chief, introduced the winning resident trauma papers presented by Vincent Chong, MD, UCSF East Bay, postgraduate year (PGY)-6 (basic science) and Sara Higginson, MD, UCSF Fresno, PGY-5 (clinical).

Resident teams from UC Davis, UCSF, UCSF East Bay, UCSF Fresno, and Stanford University had a lively competition in Surgical Jeopardy (arranged and moderated by Dr. Cooke) with the UCSF Fresno team winning for the second consecutive year. Teams from these institutions also competed in a Laparoscopic Bowl with three-person teams vying to complete skills tasks first and with fewest mistakes. Jonathan L. Pierce, MD, FACS, associate clinical professor and surgical director, Center for Virtual Care, UC Davis, planned and coordinated this event; the UCSF Fresno team prevailed once again. Residents and fellows in training also participated in a breakfast roundtable discussion on planning for life after training, including contract negotiation.
The meeting was planned by the program committee, chaired by Krista L. Kaups, MD, MSc, FACS (NCCACS President-Elect), with support from Christina McDevitt, NCCACS Executive Director.

Southwestern Pennsylvania Chapter presents most interesting cases
The Southwestern Pennsylvania (SWPA) Chapter of the ACS hosted its Presentation of Most Interesting Cases May 16 at the LeMont Restaurant in Pittsburgh. Chapter President Christopher J. Bartels, MD, FACS, welcomed attendees and facilitated the evening’s presentations. The SWPA ACS Council invited surgical residents to submit abstracts for consideration and selected the following cases for presentation:

• Glucagonoma Presentation and Treatment: Not Just an ABSITE [American Board of Surgery In-Training Examination] Question, Rachel P. Tindall, MD, Allegheny General Hospital, Allegheny Health System
• Multiply Injured Trauma Patient with Inominate Artery Laceration, James Ackerman, MD, University of Pittsburgh Medical Center Mercy
• Portal Venous Anomaly Associated with Giant Intrahepatic Duodenal Diverticulum, Michael A. Archer, DO, Allegheny General Hospital, Allegheny Health System
• Primary Hepatoma and Primary Renal Cell CA with Portal Vein Thrombus, Mark Scaife, MD, University of Pittsburgh Medical Center Mercy
• Paradoxical Portal Anatomy in a Young Male with Hepatocellular Carcinoma, Ravi N. Ambani, MD, Allegheny General Hospital, Allegheny Health System

Following the presentations, Dr. Tindall won for Most Interesting Case, and Dr. Archer was selected as runner-up.

Ohio Chapter installs new officers at annual meeting
The Ohio Chapter of the ACS hosted its annual meeting May 6–7 in Columbus, presided by Nancy L. Gantt, MD, FACS, Chapter President. Highlights of the meeting included the Ohio oration, which was delivered by Steven M. Steinberg, MD, FACS, division of trauma, critical care and burn, department of surgery, The Ohio State University Wexner Medical Center, Columbus, and the resident paper competition and mock orals.

New officers were installed and include the following surgeons: Walter S. Cha, MD, FACS, President; Scott M. Wilhelm, MD, FACS, President-Elect; Cari A. Ogg, MD, FACS, Secretary; and Timothy A. Pritts, MD, FACS, Treasurer. The Ohio Chapter was well-represented at the ACS Leadership & Advocacy Summit in Washington, DC, including participation in a productive break-out session on chapter goals followed by advocating on Capitol Hill.

Philadelphia surgeons collaborate at dinner meeting
The Metropolitan Philadelphia Chapter of the ACS (MPACS) and the Philadelphia Academy of Surgery hosted an annual joint dinner meeting May 16 at the Sheraton Philadelphia Society Hill. Nearly 200 members of the surgical community attended this year’s meeting, and 13 exhibitors were on hand to discuss the latest in products and solutions.
services. ACS Secretary Edward E. Cornwell III, MD, FACS, FCCM, FWACS, was the keynote speaker and gave a presentation on Outcomes Research and Its Impact on Trauma Care: Who, Why, When. Before the dinner meeting, the ACS Committee on Applicants, chaired by Michael A. DellaVecchia, MD, PhD, FACS, FICS, interviewed 21 candidates for Fellowship in the ACS.

Returning to this year’s program was the Resident Poster Competition, with 24 posters submitted from seven institutions; the top posters were awarded cash prizes. The first-place winner in the basic science category was David D. Aufhauser, MD, Hospital of the University of Pennsylvania, and first-place winner in the clinical category was Victoria M. Gershuni, MD, Hospital of the University of Pennsylvania. Second place in the basic science category was Patrick E. McGovern, MD, Children’s Hospital of Philadelphia, and second place in the clinical category was Thaer Obaid, MD, Einstein Healthcare Network.

MPACS members elected their 2016–2017 executive officers at the annual business meeting. Jeffrey W. Kolff, MD, FACS, Abington Health Care, was elected President; Jeffrey L. Butcher, MD, FACS, TriState Colon & Rectal Associates, was elected President-Elect; Sameer A. Patel, MD, FACS, Fox Chase Cancer Center, was elected Vice-President; Amit R. Joshi, MD, FACS, Einstein Healthcare Network, was elected Secretary; and Gary S. Xiao, MD, FACS, Drexel University, was elected Treasurer. Stephanie M.P.N. Fuller, MD, FACS, Children’s Hospital of Philadelphia, and Rosalia Viterbo, MD, FACS, Fox Chase Cancer Center, were elected Council Members-at-Large.

The 2017 chapter meeting will take place May 22 at the Sheraton Philadelphia Society Hill.

Florida Chapter hosts webinar on rectal cancer center accreditation

The Florida Chapter of the ACS hosted a webinar June 13 on the Rationale and Reality of Rectal Cancer Center Accreditation. Faculty included ACS Regent Steven D. Wexner, MD, PhD(Hon), FACS, director, Digestive Disease Center; chair, department of colorectal surgery, Cleveland Clinic Florida; affiliate professor, Florida Atlantic University College of Medicine; clinical professor, Florida International University College of Medicine; and clinical professor of surgery University of South Florida, Weston; and Mariana Berho, MD, chair of pathology and laboratory medicine, Cleveland Clinic Florida; affiliate professor, Florida Atlantic University College of Medicine; and clinical professor, Florida International University College of Medicine.

Attendees digitally joined Drs. Wexner and Berho as they discussed outcomes following rectal cancer surgery, including the rates and variance of morbidity, recurrence, survival, and constructive permanent colostomy. Significant improvements in these outcomes have been repeatedly demonstrated.
through accreditation and center of excellence programs in Scandinavia, Belgium, and the U.K.

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**Florida Chapter presents abstract awards at annual meeting**

The Florida Chapter hosted a Resident Research Competition at its recent Annual Meeting in Tampa. First-, second-, and third-place prizes were awarded in the ACS Commission on Cancer and combined basic and clinical science oral presentation categories. In addition, a first-place award was presented to the winner of both the medical student poster presentation and the resident poster presentation. The 2016 Resident Research Competition winners were as follows:

**Commission on Cancer**
- First place: Ahsan Raza, MB, BS, University of Florida (UF), Gainesville, PGY-5
- Second place: Dr. Raza
- Third place: Sangeetha Prabhakaran, MB, BS, Moffitt Cancer Center, Tampa, FL, PGY-10

**Basic Science/Clinical Science**
- First place: Dr. Raza
- Second place: Juan C. Mira, MD, UF, Gainesville, PGY-2
- Third place: Cristen Litz, MD, pediatric surgery research

**Resident Poster Winner**
- Juliet Ray, MD, Jackson Memorial Hospital, Miami, PGY-5

**Medical Student Poster Winner**
- Michelle Zeidan, UF

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**Gov. Bruce Rauner speaks at Illinois Chapter annual meeting**

The 66th Annual Scientific Meeting of the Illinois Chapter of the ACS took place May 18–20 at Memorial Medical Center for Learning and Innovation in Springfield, IL. A highlight of this year’s program was a presentation by Illinois Gov. Bruce Rauner, who spoke about the difficulties of passing a balanced budget in Illinois. He also noted that the state’s computer programs need to be updated, which would save the state a significant amount of time and money.

Program co-directors Dawn Wietfeldt, MD, FACS, FASCRS, and Paul Pacheco, MD, FACS, created an interesting and diverse program. Gary C. Vitale, MD, FACS, spoke on Flexible Endoscopy in Surgical Practice, and Gary L. Dunnington, MD, FACS, discussed Measuring and Improving Performance in Surgical Training. Walter J. Pories, MD, FACS, ACS Second Vice-President, spoke on The Surgical Cure of Diabetes? Really? and provided an update on ACS activities.

Included in the program were presentations on hernias, cancer therapies, aneurysms, carotid artery stenting, endoscopy, colorectal surgery, general surgery, population health, and duty hour restrictions.

A dinner event took place at the Abraham Lincoln Presidential Library and Museum. At this event, the Founders Competition awards were presented. The first-place prize of $500 and a plaque were awarded to Abigail M. Cochran, MD, Southern Illinois University School of Medicine (SIUSOM), for Diminishing Wound Breakdown after Pressure Sore Closure with Assistance of the VAC (vacuum-assisted closure) Device. The second-place prize of $300 was awarded to Lauren Hutchinson, MD, SIUSOM, for New Insights for Botulinum Neuromodulator Targets for Correction of the Nasolabial Fold and Midface Rhytids: An Anatomic Study and Introduction of the Malar Levator Muscle. There was a tie for third place: $200 each was awarded to Chelsea C. Snider, MD, SIUSOM, for Transient Receptor Potential Vanilloid-1 Channel Blockade As Possible Mechanism of Botulinum Toxin Type-A in the Treatment of Chronic Pain, and to Michael Ruebhausen, MD, SIUSOM, for A Bioengineered Graft to Heal Full Thickness Wounds. A total of 13 residents from SIUSOM and University of Illinois College of Medicine presented abstracts at the annual meeting.

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ACS President participates in Brooklyn-Long Island Chapter dinner meeting

ACS President J. David Richardson, MD, FACS, (center) spoke about the Challenges for Surgeons in the Future at a dinner meeting in June hosted by the Brooklyn-Long Island Chapter, attended by approximately 60 surgeons. James Rucinski, MD, FACS (second from left), received the Joseph Cunningham, MD, FACS, Mentorship award. Other attendees included (from left) Gene F. Coppa, MD, FACS, Chapter Secretary/Treasurer; John McNelis, MD, FACS, FCCM, Brooklyn-Long Island Chapter President; and Jeff P. Weiss, MD, FACS, Chapter Vice-President.

Thailand Chapter offers education and quality programs

In addition to offering the Advanced Trauma Life Support® (ATLS®) Course, the Thailand Chapter of the ACS has recently started offering the ACS Advanced Surgical Skills for Exposure in Trauma Course for residents, and is preparing instructors to deliver the Pre-Hospital Trauma Life Support Course this fall, reported Preecha Sirintongtaworn, MD, FACS, ACS Governor. In addition, the chapter organized a basic science paper competition for presentation at the 46th World Congress of Surgery, held by the International Society of Surgery meeting last August in Bangkok. The award-winning paper was titled Is Concomitant Cholecystectomy with Bariatric Surgery in Asymptomatic Patient Necessary? Lastly, the chapter conducted an international conference, Colorectal Diseases Symposium 2015, at the Bangkok-Phuket Hospital in December.

ACS Federal District Chapter of Mexico to host COT Region 14 meeting

ACS Governor Moises Zielanowski, MD, FACS, has reported that the ACS Federal District Chapter of Mexico will host the eighth Annual Meeting of the Region 14 ACS Committee on Trauma, which will take place this year at the Hotel Geneve in Mexico City September 1–2. Furthermore, a meeting on General Topics in General Surgery will take place October 6–7 at the American British Cowdray Medical Center, Mexico City.

ACS Switzerland Chapter hosts Swiss Congress of Surgery

The Swiss members of the International Surgical Society and the Fellows of the Switzerland Chapter of the ACS met June 2 at the Swiss Congress of Surgery in Lugano. Walter P. Schweizer, MD, FACS, President of the ACS Switzerland Chapter, who also is a delegate to the International Surgical Society, offered welcoming remarks at the opening reception. He noted that the Switzerland Chapter will play an important role in organizing the World Congress of Surgery 2017, which was originally scheduled to take place in Argentina but has been moved to Switzerland, and will take place August 13–17, 2017. Dr. Schweizer is organizing a program committee for this meeting that will be charged with developing a world-class event including high-quality scientific sessions, along with opportunities for networking and leisure activities. The meeting of European ACS chapters that took place in June in Lisbon, Portugal, will serve as a template for organizing the 2017 meeting. Representatives from the International Surgical Society and European Governors will plan for Clinical Congress 2016 in Washington, DC. In addition, chapter members discussed the need to recruit more Swiss surgeons to pursue Fellowship in the ACS and to become chapter members.

Medicine at Peoria participated in this year’s competition.

At the Illinois Chapter Business Meeting, the following new Officers were elected: Paul E. Pacheco, MD, FACS, and Amy L. Halverson, MD, FACS, Councilors; Mark Kuhnke, MD, FACS, Governor; Daniel M. Chase, MD, FACS, President-Elect; and Magesh Sundaram, MD, FACS, Cancer Chair. The members voted to donate $1,000 to the ACS Foundation.

Next year’s meeting will take place in Champaign. A joint meeting with the Chicago Metro Chapter is tentatively planned for 2018.
National survey of burnout among U.S. general surgery residents

In an analysis of the first national survey evaluating burnout among general surgery residents, authors Leisha C. Elmore, MD, MPH; Donna B. Jeffe, PhD; Linda Jin, MD; and colleagues found that 69 percent of U.S. general surgery trainees met the criteria for burnout. Having a structured mentoring program was associated with lower rate of burnout. The article discusses the causes and the potential impact of burnout on the quality of patient care, and calls for increasing efforts to identify at-risk populations and designing targeted interventions to mitigate burnout among surgical residents.

This article and all other JACS content is available at www.journalacs.org.
The International Relations Committee of the American College of Surgeons (ACS) sponsors three academic surgeon exchange programs to send a talented young U.S. or Canadian Fellow to the annual surgical meeting of each participating country—Australia-New Zealand (ANZ), Japan, and Germany. Afterward, the Fellows tour several sites tailored to their specific research interests. In exchange, the College accepts young academic surgeon-scholars from the participating societies to attend the annual Clinical Congress. This exchange is with the Royal Australasian College of Surgeons through the ACS Australia-New Zealand Chapter, the Japan Surgical Society through the ACS Japan Chapter, and the German Surgical Society through the ACS Germany Chapter.

The 2016 ANZ Exchange Fellow is Yi Chen, MB, BS, PhD, FRACS, a cardiothoracic surgery fellow at Monash Medical Centre, Melbourne, Australia. Dr. Chen is researching the role of Activin A, a novel cytokine in mouse models of atherosclerosis.

His U.S. counterpart, Sareh Parangi, MD, FACS, is an associate professor of surgery at Massachusetts General Hospital, Boston, specializing in endocrine surgery. She attended the Annual Scientific Congress of the Royal Australasian College of Surgeons held in Brisbane, Australia, in May 2016. Dr. Parangi’s report will be published in an upcoming issue of the Bulletin.

This October, the College will welcome Japan Exchange Fellow Takeo Toshima, MD, PhD, vice-manager, hepatopancreato-biliary surgery, Matsuyama Red Cross Hospital. Dr. Toshima performs research on hepatocellular carcinoma and living donor liver transplants. Daniel A. Anaya, MD, FACS, head, section of hepatobiliary tumors at H. Lee Moffitt Cancer Center, Tampa, FL, attended the Japan Surgical Society meeting in Osaka in April 2016.

Dr. Anaya’s report also will be published in the Bulletin.

The ACS Traveling Fellow to Germany, Perry Shen, MD, FACS, professor of surgery, Wake Forest Baptist Medical Center, Winston-Salem, NC, attended the German Surgical Society’s annual meeting in Berlin in April 2016.

His German counterpart, Thilo Welsch, MD, PhD, head of surgical oncology at the University Cancer Center, Dresden, will attend Clinical Congress 2016 and visit several surgical sites under the guidance of his U.S. and German mentors. Dr. Welsch’s work centers on tumor metastasis and pancreatic surgery. ♦
The American College of Surgeons (ACS) is offering two-year Faculty Research Fellowships to surgeons entering academic careers in surgery or a surgical specialty. The fellowship is to assist a surgeon in the establishment of a new and independent research program. Applicants should have demonstrated their potential to work as independent investigators. The fellowship awards are $40,000 per year for each of two years—July 1, 2017 to June 30, 2019—and are made possible through the generosity of Fellows, chapters, and friends of the College. The closing date for receipt of completed applications and all supporting documents is November 1, 2016.

The specific fellowships are as follows:

• The Franklin H. Martin, MD, FACS, Faculty Research Fellowship of the ACS honors Franklin H. Martin, MD, FACS, founder of the ACS.

• The C. James Carrico, MD, FACS, Faculty Research Fellowship for the Study of Trauma and Critical Care honors C. James Carrico, MD, FACS, ACS Past-President, and is designated for research in trauma and critical care.

• The Thomas R. Russell, MD, FACS, Faculty Research Fellowship honors Thomas R. Russell, MD, FACS, ACS Past-Executive Director, and is designated to support research into improving surgical outcomes.

Two additional undesignated Faculty Research Fellowships will be awarded.

General policies
The following policies cover the granting of the ACS Faculty Research Fellowships:

• The fellowships are open to Fellows or Associate Fellows of the College who have: (1) completed the chief residency year or accredited fellowship training within the preceding five years, not including time off for maternity leave, military deployment, or medical leave; and (2) received a full-time faculty appointment in a department of surgery or a surgical specialty at a medical school accredited by the Liaison Committee on Medical Education in the U.S. or by the Committee for Accreditation of Canadian Medical Schools in Canada. Applicants who directly enter academic surgery following residency or fellowship will receive preference.

• Recipients may use this award to support their research or academic enrichment in any fashion that they deem maximally supportive of their investigations. Indirect costs are not paid to the recipient or to the recipient’s institution.

• Application for this fellowship may be submitted even if a comparable application has been made to other entities such as the National Institutes of Health (NIH) or industry sources. If the recipient is offered a scholarship, fellowship, or research career development award from such an agency or organization, it is the responsibility of the recipient to contact the College’s Scholarships Administrator to request approval of the additional award. The Scholarship Committee reserves the right to review potentially overlapping awards and adjust its award accordingly.

• The ACS encourages applicants to leverage the funds provided by this fellowship with time and monies provided by their department. The College will look favorably upon formal statements of matching funds and time from the applicant’s department.

• Supporting letters from the head of the department of surgery (or the surgical specialty) and from the mentor supervising the applicant’s research effort must be submitted. This approval would involve a commitment to continuation of the academic position and of facilities for
The fellowship is to assist a surgeon in the establishment of a new and independent research program. Applicants should have demonstrated their potential to work as independent investigators.

research. Only in exceptional circumstances will more than one fellowship be granted in a single year to applicants from the same institution.

• The applicant must submit a research plan and budget for the two-year period of fellowship, even though renewed approval by the Scholarships Committee of the College is required for the second year.

• A minimum of 50 percent of the fellow’s time must be spent conducting the research proposed in the application. This percentage may run concurrently with the time requirements of NIH or other accepted funding.

• The Faculty Research Fellows are expected to attend the ACS Clinical Congress in 2019 to present a report to the Scientific Forum and to receive a certificate at the annual meeting of the Scholarships Committee.

Additional documents and questions are to be directed to the Scholarships Administrator: scholarships@facs.org or Scholarships Administrator, American College of Surgeons, 633 N. Saint Clair St., Chicago, IL 60611-3211. Access the application at facs.org/member-services/scholarships/research/acsfaculty. ♦
The American College of Surgeons (ACS) is offering two-year Resident Research Scholarships to surgeons in training who are interested in pursuing careers in academic surgery. Eligibility for these scholarships is limited to the research projects of residents in general surgery or a surgical specialty. The closing date for receipt of the completed online application and all supporting documents is September 1, 2016.

General policies covering the granting of the ACS Resident Research Scholarships are as follows:

- The applicant must be a Resident Member of the College who has completed two postdoctoral years in an accredited surgical training program in the U.S. or Canada at the time the scholarship is awarded, July 1, 2017, and may not complete formal residency training before June 2019. Scholarships do not support research after completion of the chief residency year.

- The scholarship is awarded for two years, and acceptance of it requires commitment for the two-year period. The award is to support a research plan for the two years of the scholarship, July 2017 through June 2019. The projects of residents who are involved in full-time laboratory investigation will receive priority.

- Study outside the U.S. or Canada is permissible. Renewal of the scholarship for the second year is required and is contingent upon the acceptance of a progress report and research study protocol for the second year, as submitted to the Scholarships Section of the College by May 1, 2018.

- Application for these scholarships may be submitted even if the resident has made a comparable application to other organizations. If the recipient is offered a scholarship, fellowship, or research award from another organization, it is the responsibility of the recipient to contact the ACS Scholarships Administrator to request approval of the additional award. The Scholarships Committee reserves the right to review potentially overlapping awards and adjust its award accordingly.

- The scholarship is $30,000 per year; the total amount is to support the research of the recipient and may be used for salary or stipend, research materials, and travel related to the research. Indirect costs are not paid to the recipient or the recipient’s institution.

- The scholar must attend the ACS Clinical Congress in 2019 to present a report on the research as part of the Scientific Forum and to receive a certificate at the annual meeting of the Scholarships Committee.

- Approval of the application is required from the administration (dean or fiscal officer) of the institution. Supporting letters from the head of the department of surgery (or the surgical specialty) and from the mentor who will be supervising the applicant’s research must be submitted. The College encourages diversity of applicants and institutions; only in exceptional circumstances will more than one scholarship be granted in a single year to applicants from the same institution.

For further information regarding this scholarship, go to facs.org/member-services/scholarships/resident/acsresident or contact the Scholarships Administrator at scholarships@facs.org.
MEETINGS CALENDAR

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.

AUGUST

Georgia Society of the ACS, Day of Trauma and Annual Meeting
August 19–21
Savannah, GA
Contact: Kathryn Browning, gasacs@gmail.com, www.georgiaacs.org

Alaska Chapter
August 25–26
Anchorage, AK
Contact: Danny Robinette, drrobinette@gmail.com

SEPTEMBER

Kentucky Chapter
September 16
Lexington, KY
Contact: Linda Silvestri, lsliv2@email.uky.edu, www.kentuckyacs.org

New Mexico Chapter
September 17–18
Albuquerque, NM
Contact: Melissa Davis, mdavis@nmms.org

Kansas Chapter
September 24
Wichita, KS
Contact: Denise Lantz, dlantz@kmsonline.org, www.kansaschapteracs.org

Saudi Arabia Chapter
September 28
Riyadh, Saudi Arabia
Contact: Anna Theresa P. Baltao, ann.ruh@medart.com.sa

OCTOBER

Southwestern Pennsylvania Chapter
October 1
Pittsburgh, PA
Contact: James Ireland, jireland@acms.org, www.acms.org/spec/ACS/index.html

Alaska Chapter
August 25–26
Anchorage, AK
Contact: Danny Robinette, drrobinette@gmail.com

Rhode Island Chapter
October 20
Providence, RI
Contact: Megan Turcotte, mturcotte@rimed.org, www.riacs.org

Italy Chapter
October 21–24
Rome, Italy
Contact: Giuseppe Nigri, giuseppe.nigri@uniroma1.it, www.facsitaly.org

Connecticut Chapter
October 28
Farmington, CT
Contact: Christopher Tasik, info@ctacs.org, www.ctacs.org

Arkansas Chapter
October 29
Little Rock, AR
Contact: Linda Gist, lagist@uams.edu

NOVEMBER

San Diego Chapter
November 1
San Diego, CA
Contact: Jim Cox, elcajonjim@cox.net, www.sdcacs.org

South Korea Chapter
November 3–5
Seoul, Korea
Contact: Sun-Whe Kim, sunkim@plaza.snu.ac.kr

Wisconsin Surgical Society
November 4–5
Kohler, WS
Contact: Terry Estness, wisurgical@att.net, www.wisurgicalsociety.com

Argentina Chapter
November 14–17
Buenos Aires, Argentina
Contact: Raul Ferreres, albertoferreres@gmail.com, www.facs.org.ar

FUTURE CLINICAL CONGRESSES

2016
October 16–20
Washington, DC

2017
October 22–26
San Diego, CA

2018
October 21–25
Boston, MA