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BULLETIN OF THE AMERICAN COLLEGE OF SURGEONS ONLINE EDITION

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

Craig Miller, MD, FACS, researched and wrote this engaging account of the impressive life and career of Robert M. Zollinger, MD, FACS. The narrative is a compelling read for anyone interested in the story behind one of the legends of the surgical profession.

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*New Officers were elected after press date. An updated roster will appear in the December issue.*

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The founders of the American College of Surgeons (ACS) established this organization with the goal of ensuring that surgeons had the proper education and training to provide high-quality care to their patients. To this day, Education remains one of the four Pillars of the College—along with Quality, Member Services, and Advocacy. To help surgeons make informed decisions about their investment in education and training, and to raise awareness about the exceptional lifelong learning opportunities that the ACS offers, we launched a new ACS Education and Training campaign during the Clinical Congress in October.

The time is ripe
In this era of evolving Maintenance of Certification (MOC) and licensure mandates, rapidly advancing surgical technology, and information overload, it is increasingly important that surgeons commit to lifelong learning. The ACS recognizes that surgeons in active practice have only so much time to devote to education and skills acquisition. And, although there are seemingly unlimited continuing medical education programs available at many institutions, online, and elsewhere, it can be challenging to find state-of-the-art, relevant, and inspiring education and training opportunities.

To keep pace with rapidly evolving science, technology, knowledge, and techniques over the course of a long career, surgeons need a trusted partner to teach them what they need to know in the way they prefer to learn. The ACS is well-positioned to be that principal source of knowledge and skills. We have more than a century of experience with testing and validating what works in surgical education and have access to top faculty and the latest technology.

Excellence in surgical care, including positive interactions with patients, effective teamwork, and exemplary leadership, are being built and reinforced through ACS Education and Training. The transformation of scientific and technical advances into surgical care is made possible through hands-on skills courses, and translation of outcomes data into improved quality of care is accelerated through innovative education. Fi-

WORTH NOTING:
IMPORTANT EDUCATIONAL OPPORTUNITY IN JANUARY

One upcoming educational program that may be of interest to many ACS Fellows is a one-and-a-half day conference on Patient-Reported Outcomes in Surgery (PROS). This course will take place January 29–30, 2015, at the ACS' 20 F Street, NW, Conference Center in Washington, DC. Surgeons across all subspecialty areas are encouraged to attend.

Speakers will instruct participants on national and international best practices for patient-reported outcome measurement in clinical care and outcomes research. This meeting will engage surgeons, quality-of-life researchers, payors, regulators, and technology experts and will provide a unique opportunity for the establishment of cross-disciplinary, collaborative relationships.

The meeting is being sponsored by the Plastic Surgery Foundation (PSF)—the research arm of the American Society of Plastic Surgeons (ASPS)—and the International Society for Quality of Life Research with support from the ACS. The PSF received funding to convene the PROS Conference from the Agency for Healthcare Research and Quality grant program for large or recurring conferences. The ASPS designates this live activity for a maximum of 9.25 AMA PRA Category 1 Credits.

Registration and program information is available at http://www.thepsf.org/PROS. For details contact Andrea Pusic, MD, FACS (Pusica@mskcc.org), Larissa Temple, MD, FACS (templel@mskcc.org), or Katie Sommers, MPH (ksommers@plasticsurgery.org).
To keep pace with rapidly evolving science, technology, knowledge, and techniques over the course of a long career, surgeons need a trusted partner to teach them what they need to know in the way they prefer to learn. The ACS is well-positioned to be that principal source of knowledge and skills.

nally, ACS Education and Training programs rekindle the excitement and joy of lifelong learning, resulting in greater professional expertise and confidence.

**Campaign specifics**

The ACS Education and Training campaign is designed to help surgeons, patients, and other stakeholders better understand the College’s 100-plus-year commitment to providing the finest surgical education and training programs. It will follow a model similar to the one we have used in the Inspiring Quality initiative. Just as that effort successfully built awareness about the value of ACS Quality Programs and their utility in improving outcomes and reducing health care costs, this campaign will demonstrate how ACS Education and Training programs can guide surgeons throughout their careers—from residency to retirement. It will show how the College’s programs enable surgeons to develop technical and nontechnical skills through leading-edge approaches, such as the use of simulation.

The campaign’s messaging will focus on three key points:

- ACS Education and Training programs are the cornerstones of excellence in surgical patient care.
- ACS Education and Training programs transform possibilities into realities.
- ACS Education and Training programs instill the joy of lifelong learning.

The overarching aim of the campaign is to support the needs of individual surgeons across a lifetime of practice and to highlight the critical importance of ACS Education and Training to accomplish the following:

- Increase participation in our education programs and products
- Build awareness of ACS’ leadership and innovation in education and training
- Help surgeons make informed decisions about their investment in education and training
- Promote surgical care of the highest quality and patient safety
- Make it easier for surgeons to participate in the joy and rewards of lifelong learning

An animated text video that visually tells the story of ACS Education and Training debuted at the Clinical Congress. Over the coming months, Fellows can expect to receive more information about lifelong learning through ACS podcasts, videos, media stories, and other avenues. A variety of exciting programs will be highlighted to demonstrate the scope and impact of the exceptional ACS Education and Training programs that continue to promote excellence and expertise in surgical care.

I encourage each of you to take the time to stay abreast of the ACS Education and Training programs and to take full advantage of these time-tested opportunities. The reality is that surgeons no longer have the option to practice based solely on what they learned in medical school. This campaign will help surgeons embrace the joy of lifelong learning and direct them to the information and skills they need now to continue to achieve the best outcomes for their patients into the future.

If you have comments or suggestions about this or other issues, please send them to Dr. Hoyt at lookingforward@facs.org.
Celebrating a decade of innovation in surgical education

by L. Michael Brunt, MD, FACS

HIGHLIGHTS

• Commemorates the 10th anniversary of the FLS program
• Explains the rationale for developing the program
• Describes the impact of the FLS program on general surgery practice and training
• Considers the possible future of the program

This year marks the 10th anniversary of the Fundamentals of Laparoscopic Surgery (FLS) program. In honor of this milestone, the program’s founders—all of whom are leading surgical educators, past-presidents of the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES), and Fellows of the American College of Surgeons (ACS)—are taking this opportunity to look back at the remarkable story behind the creation of FLS and its successful implementation.
Prior to the creation of FLS in 1997, learning laparoscopic surgical techniques was a haphazard affair for many surgeons.

**Beginnings**

SAGES launched the FLS program in response to the need for formal education in the underlying principles and basic skills of laparoscopic surgery. The highly anticipated launch of this program in October 2004 represented the culmination of many years of research and development by some of the leading surgeons in the field of minimally invasive surgery.

Prior to the creation of FLS in 1997, learning laparoscopic surgical techniques was a haphazard affair for many surgeons. “In the early days of laparoscopy, everybody was convinced of the value of this technique, but as it was actually becoming implemented, there were problems in a couple of regards: (1) a huge group of surgeons required training, as did residents, in an environment where not a lot of teachers were available; and (2) surgeons were being trained through industry-funded courses that were highly variable in terms of their format. People would attend courses and then go back to the hospital and get credentials,” said ACS Regent Gerald M. Fried, MD, CM, FACS, FRCSC, FCAHS, Edward W. Archibald Professor and chairman, department of surgery, McGill University, and surgeon-in-chief, McGill University Health Centre Hospitals, Montreal, QC.

“Unfortunately, when laparoscopic surgery was expanded widely, there were a lot of complications related to its introduction,” Dr. Fried continued. “And it put a really good technique at jeopardy, so that benefits that were obvious with the technique weren’t being realized and patients were suffering.”

Circa 1997, two like-minded surgeons who co-chaired SAGES Continuing Education Committee at the time, and who were performing laparoscopic surgery during its infancy in the early 1990s, Lee Swanstrom, MD, FACS, and Nathaniel Soper, MD, FACS, began sharing their ideas about how to teach the basic skills of laparoscopy. “I was reading the ATLS® (Advanced Trauma Life Support®) testing manual on the way to the SAGES meeting, and the preface to the manual featured the history of ATLS and how it had changed the way physicians care for patients. I thought ‘We need to do this for laparoscopy,’” explained Dr. Swanstrom, clinical professor of surgery, Oregon Health Sciences University and The Oregon Clinic, Portland. “Laparoscopy at the time was growing much less rapidly than we had hoped or expected. It was my feeling that this was in part because surgeons were uncomfortable with anything beyond laparoscopic cholecystectomy, as they had never mastered the basic underpinnings of laparoscopy. I met with Nat Soper and showed him the outline I had penciled out, and we were off and running,” Dr. Swanstrom said.

According to Dr. Soper, Loyal and Edith Davis Professor of Surgery and chair, department of surgery, Northwestern University Feinberg School of Medicine, Chicago, IL, and former ACS Governor, “Lee and I were amazed that, at that point, we were almost 10 years into the laparoscopic revolution, but still it was apparent that a lot of people didn’t know a lot about the cognitive aspects of it, the underpinnings, the physiology of pneumoperitoneum, the potential risks and complications, and some surgeons had not really learned some of the fundamental techniques,” Dr. Soper said. “They knew how to do a one-handed gallbladder removal, but that’s it, and we really felt that we could put together something similar to the ATLS examination for laparoscopy.”

**First steps**

Shortly after the initial discussion between Drs. Swanstrom and Soper, SAGES called upon them to lead the development of FLS. “In the early days, it was really the four of us—Lee and I for the first several months, Sallie [Matthews, SAGES executive director] then came and met with us and helped work with us on the initial part, and then as we looked for the techni-
cal skills part to put with the cognitive side, we pulled Gerry [Fried] in,” Dr. Soper said.

In addition, Jonathan Sackier, MD, BCh, FACS, FRCS, professor of surgery, University of Virginia, Charlottesville, then a member of the SAGES board of governors and chair of SAGES continuing education committee, agreed that a consistent training program in laparoscopic skills, similar to ATLS, was needed. SAGES leadership convened a task force to discuss the development of a program that assessed laparoscopic skills and technical knowledge.

“SAGES understood that we needed to do better, needed to standardize the way education was delivered and make sure that we had some criteria to tell people that, yes, we feel that they achieved the knowledge and skills that prepared them to start to introduce laparoscopic techniques into their practice. That was the germination of FLS,” Dr. Fried explained.

“The following year, a group of SAGES members organized a planning meeting and a resident course,” added SAGES past-president and FLS committee chair Steven D. Schwanzterg, MD, FACS, ACS Governor; professor of surgery, Harvard Medical School; and chief of surgery, Cambridge Health Alliance, MA. “We got a committee working on this project and a bunch of different people working on the different chapters for the cognitive portion, and it was off to the races,” Dr. Soper said.

With goals set, SAGES began the creation of a training program. The program would be a three-fold training package—didactics, clinical judgment, and manual skills—and would ensure that surgeons were grounded in the basics of laparoscopy. Drs. Soper and Swanstrom drafted the basic program.

“We then heard about a pelvic trainer that Carl Westcott [MD, FACS, associate professor of surgery, Wake Forest University School of Medicine, Winston-Salem, NC] was working on at Wake Forest. We approached him and he was kind enough to donate the intellectual property for the trainer that became the FLS box,” Dr. Swanstrom said. “We had also approached Gerry when we read about the MISTELS [McGill Inanimate System for Training and Evaluation of Laparoscopic Skills] project he was doing.”

SAGES approached Sybill Storz, PhD, with the concept of FLS. She liked the idea, and Karl Storz Endoscopy-America Inc. [El Segundo, CA], provided the seed money that allowed the project to get off the ground. “I am not sure it would have happened if it hadn’t been for the generosity of all these folks,” added Dr. Swanstrom.

“We wanted to cover only the fundamentals of laparoscopy and not try to get into highly specialized content. We thought that would be too complicated to do right out of the box,” explained Dr. Soper. “What we were interested in was truly what we called it from the very beginning—the Fundamentals of Laparoscopic Surgery.” The program would comprise two different components—knowledge acquisition and the technical aspect.

Dr. Fried’s contribution was critical in developing the technical portion. “Before I really got involved with SAGES, I was working on the same type of principles in my own departments at McGill, focusing more on the technical skills side,” Dr. Fried said. “We had worked on developing a skills simulation program that would allow us to teach skills in a very inexpensive way, but also to embed those metrics that would allow us to actually observe and define the performance. And then, when I came to SAGES and heard about the FLS program, it was just a natural fit.

“So we brought our manual skills part to the program. The didactic/knowledge component was well advanced in its process, and it was a nice merger to bring those two together. The goal was to make it different than a regular educational test where you just passively go into a room and observe things, or you do random things on animals; in contrast, FLS was highly structured, and there was this verification part that really
ensured that we had some basis [on which] to give a diploma or not.”

Meanwhile, the cognitive portion of the FLS exam was facilitated through the consultation of educational psychometric specialist Kaaren Hoffman, PhD, associate professor, division of medical education, Keck School of Medicine, University of Southern California, Los Angeles, who led item writing sessions throughout the nation, Dr. Schwitzberg said. “Beta testing of the complete FLS examination occurred at eight sites, which ultimately led to the validation of the examination. Tufts Medical Center, where I ran surgical training in MIS, served as one of the original beta test sites and a site for item writing and cognitive testing,” he added.

What did it take to create FLS?

“It took an unmet need to really create FLS,” explained Dr. Fried. “We were very naïve about how complicated it was to achieve our goals, and we learned a lot by experience. We got a lot of good advice from educators who had thought about this professionally for a long period of time. Then, we had to overcome a type of bias against being measured—some people are always a little bit concerned about it. In order to accept the measure, they have to really believe that the measurements are legitimate and measuring the right thing. So, it took solid science to actually support this.”

Dr. Soper remembers when the SAGES surgeons involved in developing the program committed to moving forward and incorporating an examination into the program. “We made the leap of saying, ‘OK, if we’re going to really do this, and do it right, this needs to be the go-to way of learning and examining people to make sure they do it right. So, we’re going to pair this with a high-stakes examination.’” That was both the stroke of genius and the challenge that delayed the fruition of FLS.

“SAGES understood that we needed to do better, needed to standardize the way education was delivered and make sure that we had some criteria to tell people that, yes, we feel that they achieved the knowledge and skills that prepared them to start to introduce laparoscopic techniques into their practice. That was the germination of FLS.”

—Dr. Fried
Partnership with the ACS
An important milestone in the evolution of FLS was the development of a partnership with the ACS. According to Dr. Soper, “As SAGES started to roll out [the FLS project], it became apparent that greater buy-in was needed and that just because SAGES said this was a good thing would not necessarily have the same clout as if we get this paired with a national organization that had weight and gravitas. That’s when we went to the College and Ajit Sachdeva [MD, FACS, FRCSC], Director, ACS Division of Education. We were able to get them to buy into the whole concept and essentially cosponsor it. I think this, to a great extent, pushed it into greater visibility and ultimately led to the ABS [American Board of Surgery] mandating it.” As a result of the partnership with the ACS, a joint FLS committee was created that is co-chaired by Dr. Fried, representing SAGES, and Lenworth M. Jacobs, Jr., MD, MPH, FACS, representing the ACS. The joint committee continues to be responsible for oversight of major decisions related to the FLS program.

Impact on field of general surgery
FLS’ impact on general surgery has been tremendous, according to Dr. Fried. “First of all, it did achieve its goal, and that was to standardize both a knowledge set and a skills set that people had to acquire. But, more importantly, it really introduced the verification of surgical training that has become a new model for other traditional programs; that is, not only to teach someone, but also to set goals. The other really interesting thing is it changed the approach from defining training by hours or rotations to a goal can be measured, so that the concept of metrics and measurable outcomes has really permeated the whole way that we train our residents now.”

“The impact of FLS has been significant since it created a standard of validated surgical training for residency education in America. On its present trajectory, the vast majority of surgeons in America will ultimately be FLS certified,” Dr. Schweitzberg said. “FLS introduced the reality of validated competency measurements into surgical practice,” added Dr. Swanstrom, “capsulizing the program’s impact…. In many ways the original goals for the program were exceeded.”

Since the inception of FLS, more than 9,000 surgical residents, fellows, and practicing physicians have successfully completed the FLS program. Since the ACS began cosponsoring FLS in 2005, more than 275 FLS on-site testing events have occurred at more than 150 different locations in the U.S. and Canada. More than 30 countries have purchased the FLS online didactics and the FLS Training System, and surgeons from more than 20 countries have taken the FLS exam.

In 2008, the ABS mandated that all general surgery residents seeking board certification pass the FLS exam to be eligible for the general surgery qualifying exam. That same year, the Covidien Educational Fund was launched, allowing more than 7,000 general surgery residents to access FLS at low or no cost over the next six years. In 2012, in a public statement, SAGES and the ACS recommended that all general surgeons who perform laparoscopy be certified through the FLS program.

Widespread influence
Because of the trailblazing efforts of the FLS developers and the positive results of the program, other types of training modules continue to spread throughout the field of general surgery. “The whole world is watching,” said Dr. Fried, “and I think the amazing thing is that all other specialty societies, whether you talk to gynecologists or urologists or even instrument vendors, are interested in taking that model and developing educational programs that are based on the same principles.”

Nonetheless, Dr. Soper said, he has been surprised that other surgical societies have not launched similar

Since the inception of FLS, more than 9,000 surgical residents, fellows, and practicing physicians have successfully completed the FLS program. Since the ACS began cosponsoring FLS in 2005, more than 275 FLS on-site testing events have occurred at more than 150 different locations in the U.S. and Canada.
programs. “I think everybody realized how much work went in, and continues to go into, making this program viable and what it costs [to develop such a program]. There are very few things in surgical training that have really been developed well, to the point where they can withstand the scrutiny of high-stakes examinations. We need more of these things to be able to make sure that we’re training residents in the appropriate fashion.”

Reflecting on the fact that most surgical residents believe that laparoscopic surgery is now the norm, Dr. Soper can see that the art of surgery has come full circle. “At some point, I think that there is going to have to be someone who is taking on a way of standardized training in open abdominal surgery. As crazy as that sounds, what we’re finding is that [with] many surgeons now coming straight out of training, there are some operations they’ve only done laparoscopically. And they don’t feel comfortable doing an open gallbladder operation or an open common bile duct exploration, or some stomach operation that they’ve opened because of complications, because 99 percent are now being done laparoscopically,” he said. “So, there’s a concern that 20 years from now, when there’s some condition that requires an open operation, surgeons are not going to be nearly as comfortable as those of us who trained in the open era and learned laparoscopy on top of that experience, as opposed to the other way around.”

The future of FLS
The surgeons involved in FLS leadership believe that it is essential to regularly revisit the blueprint to make sure the program remains relevant and up-to-date. It has only been 10 years since the FLS launch, but the question that now comes up is, “Where do we go from here?” Should a similar program be developed for more advanced technical skills related to laparoscopy that can be used for a variety of procedures? A major focus of the FLS program now is on the international level, with groups in Asia, Latin America, the Middle East, Europe, and Africa becoming FLS trained and certified and expressing interest in making the program more widely available to their surgical constituencies. Efforts are under way to determine the feasibility of translating FLS into Spanish to make the program more accessible to surgeons in Latin America and other Spanish-speaking countries.

Final thoughts
“FLS has made a big impact on my career and changed a lot of the ways I think of surgical education, and importantly, it’s brought me together with some wonderful people that I’ve met through the FLS program that have enriched me personally,” Dr. Fried said.

“The opportunity to give back to the field as one of the original FLS authors, and then years later as an FLS Committee Chair, has been fantastic,” Dr. Schwaitzberg said. “The work of the committee is endless, as the team works to continually update the material, assess for relevance, and spread out internationally.”

Dr. Swanstrom concluded, “For me, the best part of surgery is the excitement of coming up with a new idea to make things better, developing it, teaching it, and then watching it change how patients are cared for. FLS is a perfect example of this: We thought laparoscopy could be done better, we worked together to build a new way of teaching and measuring competence, and we have now seen it change how surgery is thought of around the world.”
Each year, the Advocacy and Issues Committee of the Resident and Associate Society of the American College of Surgeons (RAS-ACS) hosts a symposium at the Clinical Congress featuring a debate on timely issues in surgical training or practice. The topics are chosen based on solicited input from residents, fellows, and attending surgeons from across the nation. As part of the process of selecting contestants for the debate, applicants submit an essay to compete for a place on the panel.

The theme of the 2014 RAS-ACS symposium competition is “The five-year general surgery residency: reform or revolution?” Participants debated whether the current education paradigm is, and will continue to be, sufficient to train knowledgeable and confident surgeons in the future, or if the system needs to be dramatically changed to fit the demand of the current surgical environment. The following are the first- and second-place essays submitted from both sides of the debate.

Residents debate whether to reform or revolutionize surgical training

by Corey Wright, MD
New challenges and opportunities of many forms are already affecting surgical education today, but the question remains: What changes should we be striving for in the near and distant future? Multiple external forces indicate that the magnitude and quality of necessary changes warrant a rebirth of surgical training—a revolution in terms of what training to be a surgeon means and entails.

The ever-expanding, ever-changing nature of cumulative medical knowledge suggests that the corpus of material learned in training will become obsolete at an ever-increasing pace. We need to change what we are asking surgeons to do. Just as the Institute of Medicine called for the nation to have a health care system that learns, the goal of surgical training should not simply be to produce graduates who know, but who think.1

Competency should be measured not by demonstrating recall of management algorithms that are often outdated even by the time of an examination, but rather by judgment and interpretation in using technology and all available resources in the care of patients, as well as the ability to adapt to and employ constantly evolving recommended practices. As has long been recognized outside of medicine, the human mind is not well-suited for recall, and within medicine, it is formally acknowledged that we need new practice models that avoid reliance on memory.2,3 All specialties will need new patient care technologies and delivery systems so that evidence-based knowledge is no longer impeded by the multi-year bottleneck between dissemination of information, retention by practitioners’ memories, and ultimate delivery of care. This current system has created disparities in health care quality that are due solely to variability in physicians’ declarative memories—disparities that must be eliminated.

New approaches to training
New modes of training should be developed. The immense amounts of data collected in clinical care could be used to build thorough training modules for practicing episodic and longitudinal manage-
agement of patients, simulating much of the guess-and-check kind of learning now conducted on hospital wards. Simulated patient management eliminates risk to real patients and offers trainees experience handling a wide range of scenarios in a far more efficient manner. Similarly, trainees could learn procedures through interactive video tutorials and other simulations, and direct patient care and operating privileges could be contingent on passing multimodal standardized modules in clinical management, surgical skills, and procedure simulations. Time spent on actual patient care would be to demonstrate competence and would be far more effective and efficient for all involved. The goal of training should be to get the best care to patients and not to simply get the most knowledge into trainees’ heads; only with a new role for technology and a new professional identity can it be distinguished that these are not synonymous.

Focus on quality should also change the requirements for breadth of experience in current training. As the field of surgery has grown, general surgery graduates now pursue fellowships because of interest in subspecialty fields, and the current efforts in tracking training based on career intent can thus be augmented.\(^4\) Future endocrine, breast, or vascular surgeons should no longer need to acquire competency in hernia repairs and cholecystectomies; currently, these unnecessary requirements take away valuable training positions that could be used to compensate for the general surgeon shortage.\(^6\) Comparably, those residents who want to enter the most in-demand disciplines should not have to demonstrate proficiency managing conditions for which they will not bear responsibility in their careers. With these factors in mind, modular training can be constructed to fit an individual’s professional intentions—programs which likely would not require five to seven years of training.

Improving the efficiency, safety, and relevance of surgical education will increase the proportion of training expectations outside direct patient responsibilities, with a concomitant decrease in amount—but increase in quality—of time spent with real patients. Such restructuring could also be amenable for other much-needed modifications for career preparation. Many surgeons will ultimately have multiple responsibilities in addition to patient care, such as conducting research, administrative duties, policy work, teaching, and, most important, family.

Starting families should be a viable option for those who desire it, and flexible part-time training options for starting a family, pursuing research, and engaging in other professional interests should be developed in the U.S., particularly considering part-time training is already becoming a reality in other countries.\(^7\) Additionally, the methods through which countries like the U.K. reduce errors when average clinical hours decreased to only 43 per week should be explored for adaptation in the U.S.\(^8\) One possible schedule to address these issues could be a continuous four “on,” four “other” cycle for trainees and attendings alike, in which four days of patient duties alternate with four days for doing intensive educational activities, research, or time with family.

We have a duty to our patients to minimize risk and to provide them with physicians capable of handling their concerns, without solely entrusting delivery of surgical knowledge to an unreli-
Future endocrine, breast, or vascular surgeons should no longer need to acquire competency in hernia repairs and cholecystectomies; currently, these unnecessary requirements take away valuable training positions that could be used to compensate for the general surgeon shortage.

We now have the opportunity to enhance the future of surgery by developing new models of training and practice—focused on eventual careers, forged on an unprecedented partnership between clinicians and information technology, and based on simulation and remote curriculum modules—so that the educational benefits of direct clinical management can be coupled with the elimination of inefficiency and risk to patients. With these models, standards of quality could be raised, research accelerated, and innovation catalyzed. The benefits could be manifold, and perhaps these changes are only the beginning. 

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Surgical residents are in a unique, privileged position. Why? Because we are here; we beat the odds; we are surgeons in training. In 2012, there were 1,613 four-year university programs with 1.5 million first-time, full-time students, of which 21.1 percent (approximately 300,000 students) declared pre-med as their major.¹ ² That same year, all of the available 1,146 surgical categorical positions were filled. All things being equal, if you were a college freshman, one of the 300,000 with a desire for a surgical categorical position in one of 1,146 spots, then you had a 0.4 percent chance of attaining your goal.

To top that off, the attrition rate for general surgery was 12 percent, the pass rate on the written qualifying exam was 81 percent, and the pass rate on the oral certifying exam was 72 percent. Combined with the high standards for entry into the College, these statistics mean that of the 1,146 residents starting residency, only 588, or 0.2 percent of the original 300,000 college freshman, became Fellows of the ACS.¹ ²

Clearly we are in a privileged position, and our training is of the utmost importance. Very few people have the chance to acquire surgical training, and fewer successfully become Fellows of the College. With such a small product (surgeons) produced by this system, we must ensure that our training process produces surgeons in a timely manner, who are also “of the times” in terms of competency and skill level.

Product of the times
In 1889, William S. Halsted, MD, FACS, was named chair of the department of surgery at Johns Hopkins University, Baltimore, MD, an act that put into motion the basis of surgical education. Think of how technology evolved from the late 19th century to the early 20th century—from Bell’s telephone in 1875 to the smartphones devices of today. Yet, what advances have we made in surgical education? Surgical educators in Halsted’s era used the pyramid system, which resulted
The College needs to revolutionize the structure of surgical education to include direct admission to all fellowships for medical students who know what subspecialty they desire to pursue.

in the training of one outstanding individual. This was the only model used until 1931, when Edward Delos Churchill, MD, FACS, was named chief of surgery at Massachusetts General Hospital, Boston, and he developed the rectangular surgical residency model. The philosophy of this model was to “create a group of masters, in which no single personality dominates the institution.” So, what happened in surgical education between the 1930s and the early 1980s? Essentially nothing—it was the proverbial quiet before the storm.

Sea change

It could be said that “the flood” regarding developing education strategies for today’s surgical resident started with the Libby Zion case in 1984, followed by the New York State resident duty-hour restriction in 1989, and then the nationwide 80-hour workweek restrictions issued by the Accreditation Council for Graduate Medical Education (ACGME) in 2003. The restrictions on trainable hours continued in 2011, when the ACGME limited intern work hours to 16 hours per shift. Most of us will agree that a 120-hour workweek is too much, but the limitation to 80 work hours per week for residents leads to a cumulative amount of six months to one year of trainable time, resulting in the loss of more than five years; residents today have less time in training.

Adding to these challenges, residents are now asked to learn a broader range of surgical procedures. What were once open procedures are now laparoscopic, endovascular, endoscopic, and even robotic. There is also the issue with resident independence in the operating room; some say we have lost our autonomy. How often do we hear the elder attending say, “When I was the chief resident, I never saw my attending unless I needed him.” So, here we are, now with less training time during the same “classic” five-year residency, and yet we are asked to learn more skills in expanding subspecialties while the opportunities for surgical independence dwindle. How does the resident of today fill these multiple gaps? The answer is fellowship training.

Do these challenges make any sense? How have we tolerated these conditions? We must draw a line in the sand—it’s time for our surgical revolution! We are wasting time producing physicians who are half trained in many subspecialties—physicians who will never be general surgeons. An article in the January issue of the *Journal of the American College of Surgeons* stated that general surgeons performed an average of 23 different types of operations. Why spend hours doing deep inferior epigastric perforator procedures with plastic surgery, thoracic robotic lobectomies, or endovascular aortic repair? These are great cases to see as a junior resident, to experience a subspecialty in order to see if that could be your passion, but once you discover these cases are not part of your career goals, why scrub in on these cases again? It’s not time spent wisely, and it may be taking the opportunity to practice the procedure from a fellow who is being trained in that subspecialty.

The revolution

How does the revolution start? We regulate ourselves, which means the ACS becomes the sounding board for the advancement of surgical education, and oversees the multitude of current regulatory bodies. The College needs to revolutionize the structure of surgical education to include direct admission to all fellowships for medical students who know what subspecialty they desire to pursue. Medical students who are unsure of their specialty may enter a two-year surgery residency position, where they will rotate through all of the subspecialties. At the midpoint of the second year, they will enter a standardized application process for all of the surgical subspecialties, including rural general surgery. The following fellowships would then be for the duration of three years,
for a total training time of five years. Training under this model would produce a more proficient surgeon in less time.

Strong training models require excellent teachers, and we need to acknowledge that great surgeons do not always great teachers make. Every program needs a surgical educator—one who is a trained teacher and can monitor the academic progress of his or her students. Currently, the attending surgeon is overstretched; between clinic, operating, and endless paperwork, it’s an impossible expectation to ask these surgeons to take hours out of their week to teach.

With respect to curriculum, we need standardization during the first two years of surgical education so that every resident in the country has the same academic baseline. Although the Surgical Council on Resident Education-based module system has helped immensely with addressing this challenge, a lack of standardization continues, and with approximately 679 modules, this system provides an overwhelming amount of information. If we can formulate a standardized curriculum for our elementary students, then we can do the same for surgical residents. The ACGME milestones are a step in the right direction, but this program, at best, sets an expectation without providing the necessary tools to accomplish these goals. The curriculum should also provide simulation training. With today’s technology, a second-year resident who scrubs their first laparoscopic cholecystectomy should have already made the necessary intraoperative moves 20-plus times on simulation.

The revolution will not be simple; it will require taking the path less traveled. It will take the two things of which we do not have an abundance—time to restructure the system, and monetary resources—to make these changes possible. However, if we do not support the revolution, then we will continue down the path of least resistance, which is simply to try to make our old system work in training new surgeons. The simplest way to do work in the current training model is to make the residency period longer—again, the easy way out. Surgeons have never taken the easy way. Let’s take ownership of our training process and take the power back. It’s time for a revolution.

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The evolution of surgical training in the U.S. is best described as punctuated equilibrium—periods of stasis followed by abrupt change. In 1889, William S. Halsted, MD, FACS, rejected homespun apprenticeships and standardized surgical education with a pyramidal residency model. Inevitably, this model fueled competition, as the mastery of skills requisite for independent practice was only guaranteed to the single resident reaching the pyramid’s peak until Edward D. Churchill, MD, FACS, developed a rectangular model at the Massachusetts General Hospital, Boston, in 1938. This core training model remained relatively unchanged until disciplines such as neurosurgery and orthopaedics, driven by expanding knowledge in their disparate fields, began to forgo general surgical training altogether. In the current era, laparoscopy and the endovascular revolution, individual interests, health care reform, evidence-based practices, and quality initiatives are bringing surgical leaders to realize that mastery of the entire breadth of traditionally defined general surgical practice cannot be achieved by a single individual or training paradigm.

The first three years of current training provide a solid foundation with exposure to the major subspecialties, core surgical techniques, critical care, and perioperative management of complex patients. The latter years, however, are inadequate in refining the technical skills and mastery required for independent practice, in part due to restrictions associated with the 80-hour workweek and decreased resident autonomy. Adding to these challenges is an unspoken requirement to pursue a niche if one desires a successful academic career. Consequently, 80 percent of current general surgery graduates pursue fellowship training, resulting in a training paradigm that lasts far too long in the face of burgeoning student debt and that counterintuitively allocates less than a quarter of total training time to the ultimate field of practice. It is also important to note that five years of training ingrains technical habits that may have to be partially unlearned in specific fellowships. These issues likely contribute to the decline in caliber of general surgery applicants and the difficulty some training programs have in filling positions.

First-place essay—reform: Reformation of current surgical residency and fellowship training is the best solution by Jahan Mohebali, MD
Surveys demonstrate that approximately 78 percent of 12,000 postgraduate year-one residents changed their predicted subspecialty focus by the fifth year of training and raise concerns about mid-training resident attrition.

Current fellowship training also is flawed. Health care is embracing a disease-based approach to patient care, blurring the line between surgical and medical specialists. Surgeons have always taken pride in acting not as mere technicians, but as physicians who can offer operative therapy. Upholding this standard in the current era demands interdisciplinary knowledge and is epitomized by the vascular surgeon who has evolved into a specialist in the diagnosis, medical management, and operative management (open and endovascular) of vascular diseases. Similarly, surgical oncologists have become integral to the multidisciplinary cancer team and have acquired knowledge of radiation oncology and chemotherapy. Trauma and acute care surgeons have mastered critical care and are pursuing training in echocardiography and basic endovascular techniques for resuscitation, while rural surgeons seek training in rudimentary urology, orthopaedics, and gynecology. Interdisciplinary knowledge is also essential for minimally invasive and colorectal surgeons who have reclaimed endoscopy and are advancing the field with robotics, transanal endoscopic microsurgery, and natural orifice transluminal endoscopic surgery.

Today, offshoots of general surgery demand mastery of a body of knowledge as expansive as the parent field. In officially recognized subspecialties such as vascular and cardiothoracic surgery, the result has been longer fellowship training. In other areas, there is a push toward distinct board recognition in breast, endocrine, bariatric/minimally invasive, colorectal, transplant, oncology, pediatric, hepatic/biliary/pancreatic, and acute care surgery, though only four of these areas had official certification as of 2012. The trend toward subspecialization is here to stay, and the means to this end must be consolidated.

Plastic, vascular, and cardiothoracic surgery have adopted integrated pathways recruiting trainees directly from medical school, attracting a higher caliber of applicant. Reallocation of time provides formal exposure to pertinent areas such as noninvasive duplex imaging, vascular medicine, echocardiography, cardiac catheterization, and critical care that is not currently obtained in traditional fellowships while simultaneously shortening training time.

These nascent training paradigms, however, are by no means without shortcomings. There is a natural concern that medical...
students, having only been exposed to a few months of surgery, may not be certain about the desire to pursue such highly specialized training. Surveys demonstrate that approximately 78 percent of 12,000 postgraduate year-one residents changed their predicted subspecialty focus by the fifth year of training and raise concerns about mid-training resident attrition. Additionally, faculty in these programs face the challenge of training residents with minimal technical skill and clinical acumen compared with traditional trainees who have had five years of surgical maturation. These integrated models raise concerns for the eventual direct recruitment of medical students into the array of subspecialties, noted earlier, and consequently, the demise of core general surgery training that unifies these fields.

For these reasons, residency reform cannot occur without concomitant fellowship restructuring. The ideal training model should be anchored by a core surgical residency program modeled after the first three years of the current training paradigm, followed by an additional one-to-three year fellowship in one of the areas mentioned in this article. Similar “3+3” pathways already exist in cardiothoracic and vascular programs, and this concept logically follows the recent adoption of early specialization pathways by the Accreditation Council for Graduate Medical Education. Because the first three years of this model would not lead to board certification, the greatest challenge for the American Board of Surgery would be to create certification for all of these various fields, which is already occurring and will ensure standardized training of the highest caliber.

This training paradigm would be apportioned properly and facilitate informed decision making in choosing subspecialty training, fostering the requisite skills for successful practice in the modern era. Even with these substantial gains, overall training time will be unchanged or reduced in some cases. Finally, a specific fellowship dedicated to training community surgeons, paralleling the fourth and fifth years of current training, will provide a path through which general surgery would survive among its offshoots. Dr. Churchill was indeed ahead of his time in 1938 when he said “a frozen five year curriculum is unthinkable as it allows no latitude for the development of individual interests and proficiency.”

REFERENCES (CONTINUED)

Second-place essay—reform:
Revisiting the visions of Halsted, Churchill, and Dudley to fix surgical training a century later

“We need a system […] which will produce not only surgeons, but surgeons of the highest type, who will stimulate the finest youths…to devote their energies and their lives to raising the standards of surgical science.”

William S. Halsted, MD, FACS, delivered this statement at Yale University, New Haven, CT, in 1904, as part of his address on the Training of the Surgeon. Dr. Halsted crafted the first general surgery training system at the Johns Hopkins Hospital, Baltimore, MD, in 1889. In Dr. Halsted’s pyramidal system, only one resident in eight would complete training. Edward D. Churchill, MD, FACS, of Massachusetts General Hospital (MGH), Boston, on the other hand, wanted all of his trainees to finish as competent surgeons. Dr. Churchill, believing that “half a surgical training is about as useful as half a billiard ball,” and that residents should be able to develop their own proficiencies, did not adopt the pyramidal system, or the “frozen” five-year system.

Allen Dudley, MD, FACS, in his presidential address to the American Surgical Association in 1907, commented that “the great misfortune of the specialist of the present day is the inadequate knowledge of other departments than his own.”

Nowadays, becoming the consummate general surgeon is difficult—some would say impossible—with the expanding range of surgical diseases, disciplines, and the development of new therapies and techniques. In fact, since duty-hour restrictions were implemented, L.D. Britt, MD, MPH, D.Sc(Hon), FACS, FCCM, FRCSEng(Hon), FRCSEd(Hon), FWACS(Hon), FRCSI(Hon), FCS(SA)(Hon), FRCSSlag(Hon), Past-President of the American College of Surgeons, has expressed his concern with the increasing failure rate on the general surgery certifying exam. Dr. Britt further emphasized the importance of repetition in surgical training, which has become more challenging due to work-hour limits.

Today, general surgery residents are pursuing fellowship training in a broad range of subspecialties, and an increasing number of these fellowships are becoming accredited, which requires board certification. Even as patients seek surgeons who are experts in a particular field, there is a growing concern that residents are finishing programs with less training and less independence.
Rather than doing away entirely with the current training system, several improvements could be made. For example, surgical education, skill modules, and mentorship could begin earlier for those planning to apply for general surgery. Early specialization should uniformly be a part of surgical training programs while maintaining core general surgery rotations, and expanded use of “homework” assignments/self-assessments and simulation training courses should be incorporated into the general surgery training and education curriculum.

Early education and mentorship
When interest in surgery is expressed early in undergraduate and medical school years, it will continue and may even grow stronger by the time a student is ready to apply for a general surgery residency position. Various stakeholders have proposed that the fourth year of medical school should be restructured to implement a standardized curriculum for surgery applicants. If incorporated into education programs at an early stage, suturing workshops, skills labs, anatomy courses, and so on, can help facilitate the transition from medical school to a general surgery residency, making intern and junior years more efficient and productive. Mentorship and surgical education should begin even earlier in medical school, as soon as a student has expressed interest in surgery. Mentorship can help identify knowledge and skills gaps, and for this reason should certainly continue through residency. There may even be a benefit to providing mentorship after training to help facilitate the transition to independent practice.

Early specialization
Early specialization, fast-track, or joint-specialization programs should be uniformly available, while maintaining a core general surgery knowledge base and skills set. These training programs usually offer several core years of general surgery training with the added benefit of pursuing a particular field of interest early in training as well as dual certification. Such programs now allow only certain fast-track options (such as cardiothoracic or vascular surgery) and are only available to residents within a particular institution. These programs should expand to allow early training in all specialties, including transplant and pediatric surgery, and should be available for outside residents who have completed and demonstrated competency in the core general surgery rotations, but who may be in programs that are unable to offer certain specialty tracks due to limited resources and volume.

Under this model, program directors will be tasked with tailoring surgical curriculum to specific specialization tracks. For example, after core general surgery rotations in the first few years of residency, a resident planning to pursue a career in breast surgery may spend more time on surgical oncology, breast, and plastic surgery rotations than another resident who is interested in trauma or cardiac surgery. This specialization may help to eliminate time spent in fellowship training. For those interested in nonspecialized general surgery careers, such as rural surgery, options should remain for completing a general surgery residency.

Expanded use of simulation, skills labs, and self-assessments
Programs should continue to incorporate and expand the use of simulation training and skills labs. Simulation allows for repetition in training, as mentioned earlier, and provides a way to measure skill acquisition. Additionally, using the Surgical Council on Resident Education program to structure surgical education along with required reading assignments, weekly quizzes, and periodic self-assessments may be effective in optimizing the learning experience and improving in-training examination scores.
It has taken more than a century to create an effective and well-validated general surgery residency training system. Any attempt to make the current training system more efficient would necessitate increased help from the allied health professions to safely facilitate and coordinate patient-centered care. These improvements may also help with the increasing documentation requirements that accompany patient care and may help ensure safe sign-out exchange of patient information. Ultimately, the aforementioned ideas and concepts will improve the general surgery training system, producing stronger graduates, and perhaps reduce the additional time necessary for subspecialty training. We will have a system that will produce Dr. Halsted’s “highest quality surgeon,” providing an earlier opportunity to specialize, a concept Dr. Churchill supported, while maintaining core general surgery rotations and training, as Dr. Dudley would have wished.

**REFERENCES:**

Optimizing the OR for bundled payments: A case study

by Joseph Bosco, MD; Paresh C. Shah, MD, FACS; Richard Iorio, MD; James D. Slover, MD, MS; and Alecia Torrance, RN, BS, MBA, CNO

HIGHLIGHTS
• Describes the Centers for Medicare & Medicaid Services’ BPCI initiative and how it establishes a new calculus for OR cost-effectiveness
• Provides details about what one institution learned about bundled payment through its participation in the BPCI
• Outlines the strategies the hospital used to increase OR efficiency and cost-effectiveness, including the following:
  – Creating a new organizational structure
  – Streamlining preoperative processes
  – Reducing case times
Of the innovative reimbursement models developed under the Affordable Care Act, bundled payment will likely have the greatest impact on surgeons. Unlike other new payment models, bundled payments directly affect surgeon and hospital reimbursement. At the same time, hospitals are relying on surgeons to help make bundled services cost-effective.

The keys to maintaining operating margins under bundled payment are cost control and care coordination. But cost management in the operating room (OR) is complex. Currently, most early participants in payment bundling are focusing on direct costs—expenses related to surgery, inpatient care, post-acute care, and readmissions. The indirect costs associated with running an OR receive less attention. Many see OR labor and time allocations as incremental costs that have a minimal effect on the profitability of the service bundle; unfortunately, this view misses an important dynamic of surgical services. The OR cost structure displays a strong “stepped” effect tied to resource use. Small differences in OR efficiency can dramatically alter resource use, creating a cost impact that can erase margins under any capped payment system.

To succeed under the bundled payment model, hospitals and surgeons must collaborate to control both direct and indirect costs. The first step in this process lies in understanding the mechanics of bundled payment and how perioperative inefficiency can increase indirect costs, making bundled payment financially unsustainable. This article looks at the evolving demands to improve cost-effectiveness and resource allocation and describes how one institution was able to optimize the OR for bundled payments.

A new calculus for OR cost-effectiveness

The Centers for Medicare & Medicaid Services (CMS) launched the Bundled Payments for Care Improvement (BPCI) initiative in 2013.* The program covers 48 Medicare severity diagnosis-related groups (MS-DRGs), approximately half of which involve surgery. BPCI participants have the option of selecting one of four different payment models (see Table 1, page 31). The most comprehensive option is Model 2, which provides a single payment for both the initial hospital stay and post-acute care. This option includes all costs incurred starting 72 hours before admission; hospital OR and inpatient costs; physician services; laboratory services; and costs incurred 30, 60, or 90 days after discharge, including skilled nursing facility and home health agency services and any readmission costs.

CMS sets a target price for each service bundle based on the institution’s historical claims, less a discount. Under Models 1, 2, and 3, providers submit claims and receive normal fee-for-service (FFS) payments for services included in the episode. CMS then performs a quarterly reconciliation of actual claims to the target price. If total claims are less than the target price, the participating facility receives the difference. If claims exceed the target, providers must repay CMS for the excess. (Model 4 uses a prospective payment methodology, whereby the participating hospital receives a single prospectively determined payment for a patient hospital stay and any 30-day readmissions; the hospital pays physicians and other practitioners for services provided during the inpatient stay.) CMS monitors post-discharge services to ensure costs are not being shifted outside of the bundle period.*

Surgeons are eligible for gainsharing under the BPCI initiative. Under Model 2, for instance, hospitals can share savings related to both cost target performance and internal cost reductions with physicians. (All gain-sharing arrangements must comply with applicable Stark Law waiver requirements.)

For participating organizations, the transition to bundled payment makes it very important to monitor cost-effectiveness. But two separate components drive the potential for a positive margin on the bundled payment episode: hospital resource utilization (including the OR, as well as postoperative management) in the acute phase of care, and coordination of outpatient services after the acute phase.

The key to ensuring the cost-effectiveness of the episode is to minimize direct costs. On the acute care

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side, priorities include minimizing direct OR costs—supplies, implants, and labor—as well as hospital costs driven by length of stay and variations in care (for example, use of clinical pathways). For episodes that include post-acute care, major considerations include the cost of inpatient rehabilitation facilities, outpatient and/or in-home rehabilitation services, and postsurgical complications and readmissions.†

Yet even if a provider organization is keeping these costs under target levels and achieving profitability for the episode of care, it is still possible for the OR not to be cost-effective. To illustrate this point, consider the following example:

In a 10-hour block, a surgeon is able to perform three total knee arthroplasty (TKA) procedures. This example demonstrates moderately inefficient OR use, but under traditional FFS payment, billing would increase with procedure time and other cost allocations. As a result, the OR would cover the cost of a day of surgery and generate some margin.

Under bundled payment, however, the economics of the surgical block can be dramatically different. In this scenario, the target payment is capped for three TKA operations, but the OR still incurs the operational expenses of a full day of surgery. The bottom line: Payment may not cover OR operating costs if there are other costs generated that are above threshold expectations. Additionally, if profits are not generated under the bundled payment arrangement through cost efficiencies, no level of volume is sustainable.

Clearly, OR efficiency is important under bundled payment. Low utilization creates a high cost structure that may be unsustainable in a capped payment environment if costs are above target payments. How does this affect surgeons? Depending on the specifics of the gain-sharing contract, OR losses on a service bundle could reduce surgeon payment. However, even if a surgeon group is contractually shielded from losses, it will miss out on potential gains—and the opportunity to develop bundled payment as a sustainable economic platform.

The bottom line is that surgeons participating in a bundled payment initiative should pay close attention to perioperative efficiency. As noted in the following case study, recently surgery department leaders at an East Coast academic medical center used efficiency improvements to gain control over indirect costs and optimize the OR for success within the BPCI program.

**Case study from New York University (NYU) Langone Medical Center**

The Hospital for Joint Diseases (HJD) is an orthopaedic surgery hospital that is part of NYU Langone Medical Center. Located in Manhattan, this 190-bed specialty facility consistently ranks among the top hospitals in the U.S. and draws referrals both regionally and nationally.

In 2013, NYU was selected to take part in the BPCI initiative. Medical center leaders elected to participate under Model 2 for several cardiovascular and orthopaedic surgery MS-DRGs, including spinal fusion and a range of joint replacement procedures. With its exclusive focus on orthopaedic surgery, HJD became an important facet of the initiative. At that time, efforts to control implant costs were already well under way at HJD.‡ In addition, surgical services leaders had recently begun work to improve perioperative efficiency. These

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**TABLE 1. CMS BUNDLED PAYMENT MODELS**

<table>
<thead>
<tr>
<th>Model</th>
<th>Episode of care</th>
<th>Description</th>
<th>Payment method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Acute care hospital stay only</td>
<td>Inpatient stay in acute care hospital (physicians paid separately by Medicare)</td>
<td>Retrospective</td>
</tr>
<tr>
<td>2</td>
<td>Acute care hospital stay + post-acute care</td>
<td>Hospital inpatient stay and all related services; episode ends 30, 60, or 90 days after discharge</td>
<td>Retrospective</td>
</tr>
<tr>
<td>3</td>
<td>Post-acute care only</td>
<td>SNF, IP rehab, LTC hospital or home health agency services; post-acute episode ends 30, 60, or 90 days after initiation</td>
<td>Retrospective</td>
</tr>
<tr>
<td>4</td>
<td>Acute care hospital stay only</td>
<td>All services provided during IP stay by hospital, physicians, other practitioners; includes 30-day readmissions</td>
<td>Prospective</td>
</tr>
</tbody>
</table>
A hospital OR is the intersection point of several stakeholder groups, including surgeons, anesthesiologists, nurses, and many other clinical and support specialists.

initiatives dovetailed with the hospital’s foray into the bundled payment option.

Process problems at HJD were typical of inefficiencies found in most hospitals. Pre-surgical testing was not well organized, and the process for scheduling cases and communicating information to patients was inconsistent. As a result, the OR had high cancellation and delay rates. For the year ending July 2012, the same-day cancellation rate was 6.3 percent and the first case on-time start rate (within 5 minutes of schedule) was only 54.3 percent (n=19,234). In addition, case times for common procedures were relatively long. For instance, during the same period, the average case time (wheels in to wheels out) for multi-level spinal fusion was 221 minutes (n=895).

Overall, HJD’s participation in the BPCI initiative revealed an inefficient use of the OR. The prime-time utilization rate at HJD was just 47 percent. Low utilization is a problem for any hospital OR, given the cost of OR time and the importance of maintaining strong case volume. For a hospital entering into a bundled payment contract, low usage threatened to undercut cost savings achieved in other areas. HJD needed to increase effective capacity to operate profitably under payment caps.

New organizational structure
HJD launched its efficiency initiative by addressing the underlying reasons for poor perioperative performance. A hospital OR is the intersection point of several stakeholder groups, including surgeons, anesthesiologists, nurses, and many other clinical and support specialists. Consequently, OR efficiency can only be achieved when all the actions and goals of the stakeholders are aligned. On a practical level, this means the first step in an OR efficiency initiative must be an OR governance initiative.

In late 2012, HJD established a surgical services executive committee (SSEC) to oversee the OR. The SSEC brought together representatives from all stakeholder groups, including surgeons, anesthesiologists, nurses, and hospital executive administration. The committee served as a forum for discussing the challenges of the OR and establishing the need for change. The physician-led SSEC also functioned as an operational “board of directors” for the OR. Committee members worked together to examine specific OR process problems and establish new policies and structures to improve perioperative efficiency.

The SSEC’s first priority was to reengineer the OR’s block schedule system. At the time, many blocks were assigned in relatively inefficient four-hour units. Surgeon use of assigned block time was not monitored, and block time rules were not enforced. Poor control created frequent schedule gaps, yet block ownership issues made it difficult for many surgeons to access the prime-time schedule. Consequently, the demand for add-on scheduling rose, which increased labor costs due to overtime and call pay.

To address this problem, the SSEC established a new set of block time rules. First, the committee eliminated four-hour blocks and began assigning more efficient eight-, 10- and 12-hour units. Second, surgeons were required to maintain a utilization rate of 80 percent in order to retain their block. The committee also set an expectation that surgeons arrive on time for all scheduled cases and instituted an automatic block time release calendar to enable the OR to fill unscheduled time. Lastly, the SSEC created several “open” rooms to accommodate add-on cases and unblocked surgeons.

The SSEC began monitoring surgeon use rates and, with appropriate warnings and probation periods, reallocating block time away from physicians who could not consistently fill their blocks. The reformed system rewarded high-utilization surgeons and became an important motivator to secure surgeon cooperation with other efforts to improve perioperative efficiency, such as scheduling process changes and new expectations regarding surgeon arrival times.

Streamlined throughput
As schedule allocation issues were being resolved, an SSEC task force began working to improve preoperative processes that affect OR throughput with the following initiatives:

Procedure scheduling. Scheduling processes at HJD were disorganized, leading to significant variation in the detail and accuracy of patient information. In addi-
tion, the scheduling system dictionary had been inadequately maintained. As a result, schedule entries often listed the incorrect procedure, which created many day-of-surgery delays and led to significant supply waste.

The first step in overhauling the scheduling process was to work more closely with surgeon office personnel. Task force members initiated a monthly meeting with surgeon office managers and clinical coordinators to discuss scheduling processes and develop process improvements. The group created new standards to ensure the hospital had complete information about the procedure and patient risk factors early in the preoperative process. In addition, the task force created standardized processes for “boarding” surgical cases. A clinical scheduling coordinator role was created to manage the schedule and ensure accuracy.

Preadmission testing. The preadmission testing (PAT) clinic at HJD used some testing protocols, but they covered only a limited number of patients, were difficult to follow, and were generally conservative. Due to disorganization in PAT, assessments were sometimes redundant. As evidence that the process was broken, the cancellation rate was higher for patients seen in the PAT clinic than for those who had never used the service.

The task force addressed the PAT clinic assessment inconsistencies by creating standardized requirements for pre-surgical optimization. Members of the task force created a standard pre-surgical testing matrix based on procedure invasiveness and patient comorbidities (see Table 2, page 34) and a common matrix for evaluating abnormal lab results. They also developed consistent medication management standards and established evidence-based protocols for the pre-surgical management of comorbidities, such as diabetes and anemia.

Task force leaders also developed a telephone screening process for triaging patients to the appropriate pre-op care. HJD staff now call all patients shortly after scheduling and use a risk-based questionnaire to determine which patients must visit the PAT clinic for special assessment. This process has helped reduce the patient volume in the PAT clinic while ensuring higher-risk patients receive an aggressive evaluation.

Final clearance. Previously, a significant portion of HJD patients arrived for surgery with unresolved medical issues. The task force addressed this problem by creating stronger processes for ensuring medical optimization prior to the day of surgery.

HJD staff held a short meeting every afternoon to examine the next day’s schedule for problems with equipment or staffing, but this meeting did not address clinical/patient issues. The task force strengthened the process by converting the meeting into a true clinical review. Now, representatives from anesthesia, nursing, central sterile processing, and other areas examine the schedule for the next 24, 48, and 72 hours. They identify patients who need further clearance and resolve any scheduling problems, which helps to ensure all patients are fully optimized and ready for surgery before the day of their procedure.

Case time reduction initiative

As noted previously, average case times at HJD were relatively long. In response, the SSEC created a physician-led task force to remove delays from the system of care. Key interventions included:

Redesigning operational metrics. The first step was to create a more useful clinical measurement strategy. Task force leaders redesigned perioperative operational metrics to focus on six key intervals:

• Patient in to anesthesia-ready
• Anesthesia-ready to prep end
• Prep end to incision start
• Incision start to incision close
• Incision close to OR-discharge-ready
• OR-discharge-ready to patient out

continued on page 35
## TABLE 2. NEW PRE-SURGICAL TESTING MATRIX

A multidisciplinary task force at the NYU Langone Medical Center HJD developed a standardized pre-surgical testing matrix based on procedure and patient risk factors. The table below details required testing for various medical conditions.

<table>
<thead>
<tr>
<th>Medical evaluation</th>
<th>CBC</th>
<th>U/A</th>
<th>PT/PTT/INR</th>
<th>Basic metabolic</th>
<th>Hepatic</th>
<th>CXR</th>
<th>ECHO</th>
<th>ECG</th>
<th>ßHCG</th>
<th>T&amp;S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular and cerebrovascular disease</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x(1)</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulmonary diseases (including sleep apnea, chronic obstructive pulmonary disease (COPD), emphysema)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x(1)</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sleep apnea</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x(2)</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Hepatic disease</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Renal failure, severe insufficiency</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Bleeding disorder (acquired or congenital abnormality)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Morbid obesity body mass index &gt;40</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x(1)</td>
<td>x(2)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Malignancy, active on chemotherapy, including leukemia</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x(1)</td>
<td>x(2)</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Hypertension, poorly controlled: diastolic blood pressure &gt;110mmHg, systolic blood pressure &gt;160mmHg</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Neuromuscular disease (7), central nervous system (CNS) disease or seizure disorder</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Rheumatoid arthritis</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Seizures, CNS disease, and on meds that can affect bleeding</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Alcohol consumption &gt; 2 drinks per day</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>History of anemia hemoglobin (Hgb) &lt;10</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

1. For active, acute process, or history of COPD, moderate to severe asthma, recent pneumonia, oxygen therapy, dyspnea, tachypnea, and pulmonary function tests, if symptoms are severe.
2. If greater than 10-year history.
3. Hgb A1C / recommended but not required in diabetics.
4. If malignancy is in thorax.
5. Neck films and consider chest X ray (CXR).
6. Renal failure: potassium day prior to or day of procedure (post-dialysis).
7. Neuromuscular disease: amyotrophic lateral sclerosis, Parkinson’s, muscular dystrophy.
8. As indicated by examination.
These intervals are useful because they allow OR leaders to analyze distinct phases of patient throughput separately. In addition, each interval is “owned” by a different individual, providing a built-in point of accountability within the system.

The task force performed an initial study to provide baseline data, then began monitoring and analyzing case time performance. Case time data were also provided to OR staff and individual surgeons via dashboard reports. Data transparency helped fuel organizational change among all stakeholders.

Creating parallel workflows. Previously, patients were not brought into the OR until all instrument tables were completely prepared, but this sequence delayed case starts unnecessarily. Now, patients are wheeled into the OR once the room has been cleaned, and staff finish setting up the back table as patient prep moves forward. Similar parallel processes have also been created in the closure and breakdown phases.

Improving anesthesia workflow. The case time task force also examined ways to make anesthesia processes more time-efficient. Previously, anesthesiologists began all patient IVs, arterial lines, and pain blocks inside the OR. As part of the efficiency project, anesthesiologists started performing these procedures in the preoperative holding area, thus using the time patients spend in the holding area instead of valuable time in the OR. This change reduced in-room prep times while smoothing out the anesthesia workflow.

Deploying specialty support. Many orthopaedic surgery procedures require complex setup that can be very time-consuming. HJD addressed this issue by hiring physician assistants (PAs) to provide support for complicated surgeries. Specialized PAs also help speed up case times by providing better intraoperative support and assisting with closing.

Establishing surgeon expectations. Task force leaders observed that if the attending surgeon was not in the OR during setup, positioning, and draping, the pace of work tended to slow down. When the attending did not arrive, he or she often requested setup changes, creating further delays. In addition, when the attending surgeon was not present through the end of the case, closure could be extended significantly depending on the skills of the resident or fellow. To address both these issues, the SSEC established a requirement that the attending surgeon must be in the OR upon patient arrival and must stay through most of closure. These two changes helped ensure that OR teams maintain a steady work pace, further reducing average case times.

Planning for discharge throughput. The final case time interval (OR-discharge-ready to wheels out) was often extended because the post-anesthesia care unit (PACU) had no available capacity to receive additional patients. In many instances, the PACU was full because rooms were not ready on the surgical inpatient floor. Task force leaders addressed these problems by working directly with the PACU and inpatient nursing leadership to improve communication and capacity planning, enabling a timely OR discharge for a greater percentage of patients.

The SSEC also examined the impact of schedule issues on inpatient costs. Previously, a disproportionate share of spine and joint replacement procedures were performed on Friday. For these patients, discharge to a post-acute care facility could often be delayed due to weekend staffing issues. The result was extended length of stays for late-week orthopaedic procedures. The committee addressed this problem by working with surgeons and OR managers to schedule more spine and joint cases earlier in the week, effectively evening out case volumes and helping to reduce inpatient care costs.

Strong outcomes

Efficiency improvement initiatives at HJD led to significant gains in perioperative performance within a short time frame.

Between July 2012 and March 2014, improvements in upfront scheduling, pre-surgical testing, and perioperative coordination reduced the same-day cancellation rate from 6.3 percent to less than 1 percent. During
An OR initiative at HJD reduced average case times for several orthopaedic surgery procedures. As detailed in this figure, efficiencies in six process intervals cut average THA and TKA case times by 12 percent and 6 percent, respectively.

The increases in OR efficiencies and improvement in pre-surgical testing enabled HJD to participate successfully in the CMS BPCI. Perhaps more importantly, gains in operational efficiencies and cost controls have positioned the institution to compete in a health care marketplace that is increasingly focused on value and cost of care.

**Aligned goals**

Bundled payment is a powerful mechanism for building productive partnerships between hospitals and surgeons. At HJD, shared responsibility for clinical and financial outcomes helped align hospital and physician goals. All stakeholders worked together to control both direct and indirect costs while maximizing patient outcomes. This collaboration is critical to ensuring that hospitals operate profitably under bundled payment and that surgeons benefit from current and future bundled payment initiatives.
Massachusetts Chapter develops new grassroots advocacy program

by David McAneny, MD, FACS
For many years, the American College of Surgeons (ACS) has sponsored an annual spring Leadership & Advocacy Summit in Washington, DC. I have had the good fortune of participating in several of these events, which provide a wonderful chance for Fellows, ACS chapter officers, Governors and Regents, as well as young surgeons to learn about the legislative process and to gather with colleagues who face similar challenges. The program is growing: nearly 450 surgeons attended in 2014, up from 350 in 2013. However, we must do more to encourage greater participation of Fellows in advocacy and to foster collaboration between surgeons and policymakers, especially considering the relative number of representatives (435), senators (100), and Fellows of the College (approximately 79,600).

Faced with this realization, the Massachusetts Chapter of the ACS has promoted a novel grassroots advocacy concept on behalf of the College. This has become a core element of SurgeonsVoice, the College’s new advocacy instrument. This article discusses the rationale behind the District Office Contact by Surgeons (DOCS) program and how it works.

Introducing Fellows to advocacy

The notion of advocating with legislators about health care matters likely is unfamiliar to most Fellows, beyond what they read in publications such as the Bulletin. Although the ACS Advocacy Summit concentrates on active legislative issues, it occurs only once annually and attendance at the meeting can be costly to individual surgeons and to their chapters. Furthermore, such a limited encounter does not guarantee the opportunity to build relationships with legislators.

The goal of the DOCS program is to encourage grassroots advocacy among surgeons. Under this system, Fellows are to regularly meet with their U.S. representatives and senators and/or their staffs in their home district offices, typically every three to four months. Through this regular in-district contact, we have the ability as constituents to develop relationships with our members of Congress without traveling to Washington, DC. Furthermore, with none of the distractions of a typical day on Capitol Hill, program participants will have more time to discuss issues and reinforce our message. Fellows who are veterans of the ACS Advocacy Summit meetings and, perhaps, chapter officers or Governors, lead small groups of interested and locally respected Fellows—ideally from various specialties—to meet their elected representatives. It is a bonus if the surgeon-advocates personally know the representatives.

The DOCS program partners Fellows with ACS Washington Office staff who possess the knowledge of the issues and of the legislative process to educate Fellows before their visits. Briefings are conducted via teleconferences, webinars, and the SurgeonsVoice Web page (http://www.surgeonsvoice.org). The material covered in these resources is regularly updated so that surgeons have the background necessary to comprehend contemporary health policy issues and to support specific requests of their legislators. This preparation also addresses meeting protocol and expectations for novice visitors. Different surgeons should participate throughout the year, cultivating a lasting “farm system” of Fellows over time. Debriefings follow the meetings, and the Fellows’ impressions of their legislators’ opinions will be conveyed to the ACS Division of Advocacy and Health Policy via their chapter staff.

What makes this model so attractive is that it empowers ACS chapters, giving them a clear raison d’être with respect to advocacy, while actively enlisting rank-and-file Fellows. Moreover, this program does not impose significant financial burdens on the chapter, nor will it require surgeons to take large amounts of time away from their practices. A greater number of Fellows will presumably become involved in the advocacy process and gain a deeper appreciation of the relevance and value of both the College and its chapters.

This is a “bottom-up” effort that the chapters will organize, including enrolling advocate surgeons, coordinating visitation schedules with district offices, and collecting surgeons’ residential zip codes. (It should be noted that the College database usually contains Fellows’ workplace addresses, which may be located in
different congressional districts than where surgeons reside and vote.) It also is anticipated that individual chapters and the College as a whole will benefit from the experiences of Fellows who have served as representatives and senators at the federal and state levels.

Expanding the advocacy program
It is more practical for this grassroots advocacy program to begin with a national rather than a state focus. There are far fewer federal congressional districts than state districts, although the program may eventually serve as a model for statewide advocacy as the network of active Fellows matures. In addition, Fellows who are new to advocacy will probably be more enthusiastic about working on federal rather than state issues.

As members of Congress become acquainted with surgeon-constituents, it is expected that they will establish mutual trust and call upon surgeons to discuss health care matters, both legislative and personal. Furthermore, surgeons will become confident about inviting members of Congress and staff members to tour their operating rooms and clinics so that lawmakers will have a better understanding of how surgeons serve their patients. This system will also permit a rapid mobilization of engaged Fellows when urgent legislative situations arise.

The Massachusetts Chapter has developed the DOCS program in conjunction with College staff, including John E. Hedstrom, JD, and Christian Shalgian, Deputy Director and Director, respectively, of the ACS Division of Advocacy and Health Policy, Washington, DC. The DOCS program also benefitted from inspiration and guidance provided by ACS President Andrew L. Warshaw, MD, FACS, FRCSEd(Hon); Charles D. Mabry, MD, FACS, Chair, ACS Health Policy Advisory Council (HPAC); Ronald I. Gross, MD, FACS, HPAC Region Chief; and Peter T. Masiakos, MD, FACS, HPAC member. Oscar D. Guillamondegui, MD, FACS, Past-President of the Tennessee Chapter, played an influential role in introducing the Massachusetts grassroots advocacy program to the ACS Tennessee Chapter, a state with decidedly different politics than those in Massachusetts. In fact, this home-district office advocacy concept was presented at the executive planning session during the annual meeting of the Tennessee Chapter in Paris Landing on August 8, 2014. Notably, other chapters have expressed a strong desire to participate in this pilot program as well.

Grassroots activities via SurgeonsVoice form a critical component of the College’s overall advocacy efforts, which also include direct lobbying by ACS staff and the work of the ACS Professional Association’s political action committee, ACSPA-SurgeonsPAC. Successful advocacy requires that all three elements complement each other and function at a high level.

The participants in the Massachusetts grassroots advocacy program appreciate the College’s support and look forward to a rewarding collaboration among the ACS, its chapters, and Fellows through SurgeonsVoice and the DOCS program. We intend to create a model that can be implemented by all chapters and coordinated by the College’s Washington, DC, advocacy staff, which will be responsible for the education component of this program.

Fellows who are interested in nominating their chapter for participation in this grassroots advocacy effort should contact Sara Morse, Manager of Grassroots and Political Affairs, at smorse@facs.org. How powerful it will be when members of Congress return from recesses at home and learn from their colleagues that, as a group, they have met with thousands of surgeons from across the nation.
This article addresses a difficult ethical dilemma that transplant surgeons may potentially encounter: whether a patient with a psychiatric illness is a good candidate for a liver transplant. This case study illustrates the challenges involved when considering the ethical principles of patient self-determination, distributive justice of scarce medical resources, “social worth,” and protection of vulnerable patient populations. Are patients with psychiatric illness able to provide consent for transplantation? Is it possible to avoid misallocating valuable donor organs and, at the same time, fairly allocate these resources? This article seeks to answer these questions and provide insight into this ethical dilemma.
Case study
A surgeon member of an interdisciplinary transplant team is called to consult on a patient admitted to a large community hospital. The patient is a 45-year-old man with a history of schizophrenia, obesity, dyslipidemia, and type II diabetes mellitus. He has been diagnosed with non alcoholic steatohepatitis (NASH). After several days in the hospital, his model for end-stage liver disease score has worsened to 22. The admitting service now wishes to consult the transplant team about the possibility of liver transplantation for this patient.

While reviewing the patient’s chart, the surgeon comes across the patient’s psychiatric history. Since his diagnosis with schizophrenia at the age of 18, the patient has had numerous exacerbations of his psychotic symptoms in addition to problems with executive functioning—the brain process that controls reasoning, planning, and decision making. Since his mid-20s, he has been unable to live independently and currently lives with his sister. His parents live out-of-state and have not spoken to the patient in many years. His last psychiatric hospitalization was five years ago, and he receives federal disability. The patient has been adherent to his psychiatric treatment plans, attends his psychiatry appointments, and has never used alcohol, tobacco, or drugs. He has never attempted suicide and is not currently suicidal or homicidal. His current treatment includes oral haloperidol. For 10 years he was treated with olanzapine, a common side effect of which is weight gain; notably, the patient became morbidly obese over this period of time. His weight gain likely contributed to his development of NASH.

The surgeon speaks with the patient about his condition and what would be required of him post-transplantation at a level the surgeon considers appropriate for the patient’s mental capacity. The surgeon concludes that the patient understands most of what has been said, but also recognizes that his understanding of the entire transplantation process is not comprehensive. In the end, the patient states that he wants the surgeon to save his life.

The team’s evaluation proceeds. Assuming that no medical or surgical contraindications for transplantation arise during the rest of the work-up, the following four options are available to the transplant surgeon:

- Postpone making a decision about the transplant until the patient’s surrogate gives written informed consent
- Recommend that the transplant team wait to place him on the transplant list
- Conclude this patient is a poor transplant candidate and recommend that the team not place him on the transplant list
- Conclude this patient is a good transplant candidate and recommend that the team place him on the transplant list

Discussion of options
Option 1: Wait until the patient’s surrogate gives informed consent
This option is based on an assessment that informed consent for a surgical procedure with significant risk may not be possible for someone with a major psychiatric illness. Informed consent is dependent upon the decisional capacity of the patient or the patient’s surrogate. Decisional capacity requires the ability to understand the basic facts involved in the medical decision, to appreciate the personal significance of the medical decision, to assess all available information, and to express a clear and consistent choice. In other words, the patient or the patient’s surrogate is consistent in choosing among available options.1,2

Some health care professionals may argue that the stringency of establishing a standard for capacity in a single patient should be determined by the level of risk attendant to the result of the decision.2,3 In this case, the risks inherent with the decision to accept an organ and the patient’s responsibility of caring for the organ after transplant are great. Incapacity might be suspected, but not concluded, due to the patient’s diagnosis of schizophrenia. Based upon the potential for
poor outcome or the ineffective use of valuable and scarce medical resources, it could be argued that this patient’s mental illness should at least require a formal capacity assessment, which may preclude him from making the decision.

A term often confused with capacity is legal competency, which must be assessed by trained personnel within the legal system. Decision-making capacity in these situations is determined clinically rather than legally. Therefore, the treating physician must, based on his or her best clinical judgment, assess the patient’s ability to complete cognitive tasks and make a determination regarding the patient’s decisional capacity. Although a number of instruments are available to assist clinicians in assessing capacity, a formal guideline or best practice for assessment of decisional capacity has yet to be developed.2,3

If the patient is evaluated clinically and considered incapable of making a reasonable decision, a surrogate decision maker must be identified. If the patient has not formally established a durable power of attorney for health care-related matters, then the treating physician should turn to the patient’s family for a surrogate who either knows the patient sufficiently to represent the patient’s values and goals or who is otherwise capable of making decisions based on the patient’s best interests. In many states, decision-making responsibility among family members for patients without decisional capacity follows a hierarchy that prioritizes parents above siblings. However, in this case, it would be ethically compelling for the treating physician to turn to the patient’s sister with the expectation that she is available, knows the patient well, and is invested in the patient’s well-being.

This option is not available for potential organ recipients with psychiatric illnesses who lack decisional capacity and for whom a surrogate decision maker cannot be identified.

**Option 2: Recommend waiting to place him on the transplant list**

Following multidisciplinary evaluation of transplant candidates, sometimes the decision is made to wait in order to monitor one or more factors used in the final decision to list a patient for organ transplantation or to gather other information; these candidates are to be reconsidered for transplantation at a later time.

In this case, a final decision may be postponed for a number of reasons. The surgeons may decide to monitor the patient’s mental status further for a number of reasons, including the decision to obtain a written plan from his psychiatrist for management of the patient’s psychiatric symptoms post-transplantation, to further assess his support system, or to enroll him in social and/or financial support programs as needed. The American Medical Association (AMA) formally encourages transplant teams to intervene to overcome such obstacles to post-transplantation care whenever possible.4

Current United Network for Organ Sharing (UNOS) criteria dictate that listed candidates are given priority based on medical urgency and time spent on the waiting list.5 Thus, although it may be reasonable to await further evaluation of this patient before making a decision, it is still important to proceed expeditiously.

**Option 3: Recommend leaving him off the transplant list**

This option is based on the assessment that severe psychiatric illness may complicate the post-transplantation course to such a degree that commitment to “distributive justice” (that is, equitable rationing of scarce resources) requires that organs be allocated to patients without these co-morbidities.

Awareness that psychosocial factors affect the survivability of organs post-transplant has been integrated into government regulation of transplant decisions. The U.S. Department of Health and Human Services’ Centers for Medicare & Medicaid Services (CMS) requires that every transplant candidate receive a comprehensive psychosocial evaluation. To be reimbursed for transplant services, the facility must evaluate candidates “for issues that could affect the patient’s compliance with the post-transplant treatment that is necessary to maximize the chances of a successful transplant, such as substance abuse or behavioral or psychiatric issues.”6 Furthermore, federal law mandates transparency of outcome statistics, and CMS takes these data into account when determining re-approval of transplant centers.6 This mandate creates an incentive for transplant programs to recruit the lowest-risk trans-
Current American Association for the Study of Liver Diseases practice guidelines for the evaluation of liver transplant candidates note that “psychosocial issues often are the greatest deterrent to successful liver transplantation.”

Current American Association for the Study of Liver Diseases practice guidelines for the evaluation of liver transplant candidates note that “psychosocial issues often are the greatest deterrent to successful liver transplantation.” A survey of American transplant programs (72 liver, 217 kidney, and 127 cardiac transplant programs) found that schizophrenia, past or present suicidality, intellectual disability (defined as IQ <70 by the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition), and substance abuse disorders all numbered among the contraindications to heart, liver, and kidney transplants. Among all programs surveyed, the rate of denying a transplant for psychosocial reasons alone was between 2.8 percent and 5.6 percent. Specifically, among surveyed liver transplant programs, the rate varied by site from 0 percent to 20 percent.

Option 4: Recommend placing him on the transplant list
Some physicians strongly believe that they should serve as the patient’s advocate regardless of the potential for misallocation of scarce medical resources. The World Medical Association’s Statement on Human Organ Donation and Transplantation proposes that transplant physicians’ ethical obligation to seek the well-being of their patients should usually be primary. Physicians should be careful that this ethical obligation does not lead to unethical and illegal tactics to get a patient transplanted. In 2003, three Chicago, IL, medical centers were forced to settle lawsuits after an insider at one of the centers alleged irregularities, suggesting that physicians at the medical centers had intentionally misdiagnosed and hospitalized their patients to accelerate the process of receiving a transplant organ.

Proponents of this option might also argue that this patient’s mental illness is not severe or unstable enough to classify him as a high-risk transplant candidate. A total of 31 of 48 (67.4 percent) liver transplant programs surveyed in one study excluded patients with active psychotic symptoms. As such, the number of schizophrenic patients having received a donor organ is small. Case series have shown both positive and negative outcomes regarding graft survival following transplantation. It is unclear whether the factors that made these candidates acceptable transplant candidates despite their psychotic illness might have improved their post-transplantation outcomes.

Some health care professionals may recommend listing this patient based upon the assertion that denying transplantation due to mental illness constitutes a social worthiness judgment—that is, based on aspects of a patient’s social status rather than medical criteria. The AMA’s Council on Ethical and Judicial Affairs has stressed that social worth should not be factored into the allocation of scarce medical resources.

Ethical bottom line
Decisions regarding transplant organ allocation rely on a two-step process. The first step involves the procurement of donor organs and the decision as to which transplant candidate will receive these organs. The U.S. Congress passed the National Organ Transplant Act of 1984 to create a national organ procurement and allocation organization known as the Organ Procurement Transplantation Network (OPTN) to carry out these duties. UNOS has contracted with the federal government since 1986 to administer the OPTN. Regional organ procurement organizations (OPOs) coordinate organ procurement and contract to allocate these organs to participating regional transplant hospitals. Federal law mandates that both OPOs and transplant hospitals hold membership with the OPTN, which provides oversight of their transplant procedures and outcomes. Since 2000, the UNOS criteria that dictate organ allocation to listed candidates have been based primarily on medical urgency.
plinary teams at transplant hospitals, such as the team described in this case study. Each transplant hospital has a standard set of criteria that an interdisciplinary transplant team follows when making listing decisions for the transplant candidates that present to their hospital. The variability of these criteria between transplant programs is well known, especially with regard to psychosocial criteria.8

Discussion about listing transplant candidates with mental disorders reached a public forum in 1995 with the case of Sandra Jensen. When Ms. Jensen was denied transplantation at two centers because she had a cognitive disability, a third-party physician argued that the decision violated the Americans with Disabilities Act of 1990 (ADA). One team reversed its decision before legal action was filed, and Ms. Jensen received her transplant. The decision launched a national discussion about the appropriateness of transplantation for patients with mental disabilities.5 Some argue that even using non-diagnosis–based criteria, such as a history of medication noncompliance, might violate the ADA if the behavior occurs more frequently in people with mental illness.15 To date, UNOS has not provided ethical guidance to programs regarding the eligibility for transplant of people with mental illnesses or disabilities. In the absence of guidelines from national transplant organizations, the decision to provide a transplant organ to a patient with psychiatric illness therefore requires careful consideration of ethical principles in addition to a complete medical and psychosocial evaluation.

REFERENCES

On August 4, the Centers for Medicare & Medicaid Services (CMS) released the Inpatient Prospective Payment System (IPPS) final rule, which establishes federal fiscal year (FY) 2015 policies for Medicare payments to hospitals for inpatient stays. Under the final rule, the payment rate update to general acute care hospitals is 1.4 percent for FY 2015. The rule also updates payments for inpatient services provided by certain IPPS-exempt providers, such as cancer and children’s hospitals, and religious nonmedical health care institutions.

Most policy changes in the IPPS final rule took effect October 1. The American College of Surgeons (ACS) submitted comments to CMS on the proposed rule, which were taken into consideration as CMS crafted this final rule.

How does the IPPS affect surgeons?

Because the IPPS rule outlines coverage criteria for Medicare Part A inpatient hospital claims, and a large proportion of surgical care is provided in the inpatient setting, this rule directly and indirectly affects surgeons. The IPPS rule also contains hospital pay-for-performance and pay-for-reporting programs that center on quality metrics and are often related to surgical outcomes. In addition, the IPPS contains changes to indirect and direct graduate medical education (GME) payment policies that affect academic medicine and the general surgery workforce.

What is the Hospital IQR program, and what are the benefits of introducing measures into this type of pay-for-reporting program before their inclusion in pay-for-performance programs?

The Hospital Inpatient Quality Reporting (IQR) program is a pay-for-reporting program that requires hospitals to report on specific measures. Successful participation is determined by whether hospitals report on the IQR measures, but not how hospitals performed on those measures. Pay-for-reporting programs are different from pay-for-performance programs because the latter base reimbursement on a hospital’s performance with respect to specified measures. The IQR program provides an opportunity to further analyze and understand the usability of measures and their effects before they are incorporated into pay-for-performance programs, such as the hospital Value-Based Purchasing (VBP) program. Under the hospital IQR program, hospitals must meet the requirements for reporting specific quality information to receive the full market basket update for that year. (The CMS market baskets are used to update payments and cost limits in the various CMS payment systems. The CMS market baskets reflect input price inflation facing providers in the provision of medical services.) Hospitals that do not comply will receive a 2 percent reduction in that year’s inpatient hospital payment update.

One category of measures the ACS considers critical to further analyze in the IQR program is readmission. It is important to examine the distribution of performance between hospitals with varying proportions of patients with low socioeconomic status (SES) and to determine whether disparities are attributable to quality of care or nonclinical factors.

The College is of the mindset that the unexplained differences that have been identified in readmissions to hospitals that provide care to underserved populations should be used to drive improvement, and should not be included in pay-for-performance programs prior to resolving those differences. If included without accounting...
The ACS strongly supports measures drawn from clinical data, which generally yield more accurate and relevant information about the quality of care delivered and patient outcomes.

What changes did CMS make to the hospital VBP program?
Under the hospital Value-Based Purchasing (VBP) program, CMS calculates a hospital’s VBP incentive payment based on a hospital’s performance on specified measures. In the IPPS final rule, CMS made changes to the measures included in this program, some of which are relevant to the provision of surgical care. CMS finalized a proposal to continue including the current central-line bloodstream infection measure in the hospital VBP program for FY 2017 and beyond. This measure was previously adopted for the hospital VBP program for FYs 2015 and 2016. However, it was not finalized for continuation for later years because the Centers for Disease Control and Prevention is developing a reliability-adjusted version of this measure that would allow for more meaningful differentiation among hospitals by accounting for differences in patient case mix, and other factors that contribute to variations in care among hospitals. The ACS comment letter encouraged CMS to include the reliability-adjusted version of this measure in the hospital VBP program when that measure is available.

CMS also discussed the use of condition-specific episode-of-care payment measures for the hospital VBP program in the future. Three out of six of the possible future measures are surgical: (1) hip replacement/revision; (2) knee replacement/revision; and (3) lumbar/spine operations. CMS did not finalize this proposal in the IPPS final rule but did note that the six measures are designed to support more targeted assessments of hospital performance by using the cost of major clinically related services in the post-discharge period as an indicator of a hospital’s success in delivering high-quality care and services during the hospital stay. The ACS commented that CMS should proceed with caution when implementing episode-based measures in the hospital VBP program and allow for an opportunity for the agency to learn from other bundled payment programs, such as the Bundled Payment for Care Improvement initiative. The ACS also asserted that when developing such episode-based measures, CMS should use a methodology that is just as rigorous as the standards applied to traditional quality measures.

for differences in SES and other confounding factors, hospitals that provide care to underserved populations will be at an even greater disadvantage with respect to receiving appropriate reimbursement.

Another area of concern to the ACS is the use of measures based on claims data. Claims data do not address the nuances of comorbidities, severity, conditions present on admission, complications, SES-related factors, and patient experience. The ACS strongly supports measures drawn from clinical data, which generally yield more accurate and relevant information about the quality of care delivered and patient outcomes. Consequently, the ACS is closely tracking and providing feedback on claims-based measures included in the IQR program, such as hospital-wide all-cause readmission; hospital 30-day all-cause, unplanned, risk-standardized readmission rate following coronary artery bypass graft procedures; and hospital 30-day, all-cause, risk-standardized rate of readmission following acute ischemic stroke. Due to the constraints found in the use of claims data for this measure, the ACS encourages the use of measures based on data from clinical registries.
Does the FY 2015 IPPS final rule make any changes to the HAC reduction program?

Section 3008 of the Affordable Care Act (ACA) requires CMS to establish a program for IPPS hospitals to improve patient safety by imposing financial penalties on hospitals that rank toward the bottom with respect to hospital-acquired conditions (HACs) specified under this program.

Since October 1, hospitals that rank in the lowest-performing quartile of HACs, based on data collected two years prior, will be paid 99 percent of the payment that would otherwise apply. In other words, these hospitals would face a 1 percent payment reduction. This HAC Reduction Program adjustment will be applied after adjustments are made under the hospital VBP program and the Readmissions Reduction Program. The HAC Reduction Program is separate from and in addition to the HAC Program, which withholds payments to hospitals for select conditions not present upon admission to the hospital.

The FY 2015 IPPS final rule made no changes to the proposed rule and finalizes provisions adopted in last year’s rule for implementing the HAC Reduction Program. There will be eight measures grouped into two domains.

The ACS submitted comments on the following measures found in the table on this page: PSI-90 (composite measure), PSI-6 (iatrogenic pneumothorax), PSI-7 (central venous catheter-related blood stream infections rate), PSI-8 (postoperative hip fracture rate), PSI-12 (postoperative pulmonary embolism (PE) or DVT rate), PSI-13 (postoperative sepsis rate), PSI-14 (wound dehiscence rate), PSI-15 (accidental puncture or laceration).

In particular, the ACS expressed concerns over the use of a composite measure, which makes it difficult to identify specific cases related to the measure; pointed out potential unintended consequences of trying to meet particular measures; and urged CMS to consider exclusions when development of the condition is independent of quality of care provided by the surgeon.

Did CMS make any changes to indirect and direct GME payments?

Yes, CMS made minor revisions to its policies for reimbursing hospitals for indirect and direct GME costs, and some of these changes affect general surgery residency programs. The ACA allows for redistribution of residency slots from closed teaching programs and includes provisions that indicated a
Since October 1, hospitals that rank in the lowest-performing quartile of HACs, based on data collected two years prior, will be paid 99 percent of the payment that would otherwise apply. In other words, these hospitals will face a 1 percent payment reduction.

Alternative Medicare payment methodology for short inpatient stays. The ACS comment letter stressed that in addressing short stays, CMS should first consider a system in which patients are assured that their care and financial obligations will not be adversely affected due to their admission status. Whereas a patient may receive the same care whether they are considered an inpatient or on observation, the difference in the financial impact on the patient for the two settings can be drastic. The ACS also urged CMS to preserve the primacy of the physician's clinical judgment in making admissions decisions about individual patients. Policies that inadvertently pressure the treating physician into definitive decision making before a patient’s future clinical course is reliably predictable are not in the best interest of the patient. In addition, the ACS letter stressed that CMS should not withhold payment to physicians when there is a mismatch between the site-of-service on claims submitted by hospitals and by physicians.

There is no difference in physician work for the same service provided in the inpatient setting versus observation. The hospital’s designation of a patient should have no bearing on physician billing, and physician payment should not be denied for lack of agreement between the hospital and physician claims. The ACS recommended that CMS take these and other considerations into account in developing a short inpatient hospital stay policy.

The FY 2015 IPPS final rule can be accessed at http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/FY2015-IPPS-Final-Rule-Home-Page.html. Contact the ACS Regulatory team for additional information at 202-337-2701.

Did CMS make changes to the two-midnights policy or policies impacting short inpatient stays?

CMS did not revise the two-midnights policy in the IPPS final rule, but did solicit feedback on how to design a possible...
Colorectal cancer metastatic to the liver: Making the unresectable resectable

by Perry Shen, MD, FACS, and Judy C. Boughey, MB, BChir, FACS

One of the most common tumor types that surgical oncologists specializing in hepatobiliary and pancreatic neoplasms see in clinical practice is colorectal cancer liver metastases. This fact is unsurprising, given that colorectal cancer is the third most common cancer in the U.S. Approximately one in 20 Americans will develop colorectal cancer in their lifetime.1 Resection of hepatic metastases provides a five-year survival rate of 30 percent to 50 percent and is considered the treatment of choice for patients with resectable disease. 2,3 Unfortunately, most patients are not candidates for metastasectomy at time of diagnosis.4-6

Consider, for example, a 51-year-old woman with colorectal liver metastases involving both lobes of the liver with at least 12 lesions specifically described in the magnetic resonance imaging report, which also included the term “innumerable hepatic metastases.” In the 1990s, this disease would have been considered unresectable, and the patient would have received systemic chemotherapy with a median survival of 15 months.7 However, much has changed since then in the treatment of metastatic colorectal cancer, which has led to greatly improved survival, especially for patients with liver-only disease. These new approaches have increased the role of surgeons in the management of these patients.

Advances in chemotherapy
The most important development has been the introduction of more effective chemotherapeutic agents for stage IV colorectal cancer. Drugs such as Oxaliplatin and Irinotecan, when combined with 5-Fluorouracil/Leucovorin, have produced response rates in the 50 percent range and median survivals up to 20 months.8

Hepatic resection
The ability of chemotherapy to decrease the size and number of tumor masses has led to downstaging of liver metastases, which were initially considered unresectable, to resectable. Adam and colleagues demonstrated that systemic chemotherapy downstaged 12.5 percent of patients with inoperable disease, enabling them to undergo hepatic resection. The five-year overall survival of this group was 33 percent.9 A recent paper from China reported that using an even newer systemic therapy regimen containing cetuximab, a biologic agent, plus chemotherapy to downstage unresectable liver metastases, 25 percent of patients were able to undergo surgery with a median survival of 35 months.10 These studies clearly show patients with advanced colorectal liver metastases still have a chance to undergo resection of hepatic metastases if they respond well to systemic therapy.

Clinical trials needed
Questions remain regarding the timing of systemic therapies and the role of surgery that need to be addressed in clinical trials. An editorial in the Journal of
Clinical Oncology highlighted some key issues, such as whether patients with resectable disease should undergo neoadjuvant chemotherapy and whether these patients can be stratified into good-risk and poor-risk groups. Also raised were questions regarding the best preoperative systemic therapy regimen for patients with unresectable hepatic metastases. Although certain patients show some response to neoadjuvant systemic therapy, they still have extensive bilateral disease that may be considered unresectable using traditional surgical approaches. In these cases, patient selection and improvements in surgical technique have allowed surgeons to remove all disease using two-stage hepatic resections combined with portal vein embolization. Vauthey and colleagues at the University of Texas MD Anderson Cancer Center, Houston, reported their outcomes using this approach in 65 patients. In these patients who had responded to systemic therapy, a limited resection of disease in the left liver was performed, followed by right portal vein embolization, and then, at a
second operation, an extended right hepatectomy. Approximately 30 percent of patients who had the first surgery dropped out due to tumor progression, but those patients who were able to undergo the second operation had a five-year overall survival rate of 51 percent. The patient described earlier was able to undergo this approach and have all hepatic metastases resected. Figures 1A–D, page 50, demonstrate computed tomography images of her disease at various stages of treatment.

Because fewer than 10 percent of patients with advanced colorectal cancer would be candidates for this approach, a multicenter trial would be required to answer questions regarding which patients are the best candidates. How much response to systemic therapy is needed, as defined by radiographic imaging or biochemical markers? What is the optimal timing of the liver operations and portal vein embolization? In cases of synchronous metastatic disease, what is the best way to manage the primary?

Colorectal cancer metastatic to the liver is a great model for using advances in multidisciplinary care to get patients to surgery, which offers them the best chance for long-term survival, or even a possible cure. Viable clinical trials to study these interventions and determine which patients are the most appropriate candidates are necessary.

REFERENCES
The gift that keeps on giving

by David L. Nahrwold, MD, FACS

Editor's note: This is the second in a series of historical vignettes that the Bulletin is publishing as part of the regular “From the Archives” column. These brief essays center on key individuals and events in the history of the American College of Surgeons (ACS) and are written by members of the ACS Surgical History Group, which is chaired by ACS Past-President LaMar S. McGinnis, Jr., MD, FACS.

Franklin H. Martin, MD, FACS, started the surgical journal, Surgery, Gynecology, and Obstetrics (SG&O), in 1905, seven years before he founded the American College of Surgeons (ACS). To publish SG&O, he established the Surgical Publishing Company and engaged his friend Thomas Donnelley to print it at his Chicago, IL, printing house. Dr. Martin and his wife, Isabelle, held 51 percent of the stock, and the benefactors whom he solicited owned the remaining 49 percent. The publishing company was a financial success, enabling Dr. Martin to fund his annual Clinical Congress of Surgeons of North America from its profits.

Soon thereafter, SG&O was made the official journal of the ACS, and the Clinical Congress was integrated into the College. The publishing company acquired a building adjacent to the Murphy Memorial for its offices. By 1920, Martin had redeemed all the shares of the benefactors at par value, leaving him and Isabelle as the sole owners. Mrs. Martin owned 260 of the 270 total shares, and Dr. Martin owned the remaining 10. A year later, Dr. Martin signed a directive that upon his and Mrs. Martin’s deaths, the stock and all other interests of the publishing company would be transferred to the ACS. Between 1925 and 1934, the profits from the journal ranged from $15,800 to $34,900. The Martins, who had no children, were wealthy from his former practice, his salary from the College, and the profits from the journal.

Dr. Martin died of a sudden heart attack in March 1935. A week later, Mrs. Martin, who now owned the publishing company, attended a meeting of the Executive Committee of the Board of Regents and announced that the stock and property would be transferred to a trust named the Franklin Martin Memorial. Although she was eligible to receive the entire income from the trust until her death, she elected to receive only $18,000 annually ($313,000 in 2014 dollars), which was Dr. Martin’s salary from the College at the time of his death. The remainder of the earnings of the trust was to be used to purchase annuities for the longtime, faithful employees of the Surgical Publishing Company. Meanwhile, the College was appointed to manage the journal and recognize it as the official publication of the organization. The value of the stock was estimated at $350,000 ($6 million in 2014 dollars).

The Regents passed a resolution thanking Mrs. Martin for this extraordinary gift. She responded to the Regents by letter:

My Dear Friends: I hesitate to intrude upon you when I know that every moment of your time is filled to the utmost, but I cannot let these days go by without telling you of my deep appreciation of all the gracious courtesies you have extended to me. I recognize that it is the silent tribute of your loyalty and devotion to Franklin Martin, and as such I accept it with tender gratitude. I feel certain that deep in each of your hearts lies the earnest intention to raise the torch which has been laid down, and, step-by-step, to carry it to new and higher planes of idealism for the happiness of mankind and the betterment of humanity. May all success go with your efforts and may the spirit of him to whom the honor and progress of the College meant so much follow you as you climb the upward path. With no words
The SG&O building at 54 E. Erie St., painted for an ACS holiday card by Fred Semmler.

The first issue of SG&O.

The SG&O building in 1995.

to tell you of all that your understanding sympathy has meant to me, and with abiding and personal affection for each member of your board, I am yours most gratefully,

Isabelle Martin

P.S. Since I wrote the above the flowers have come. They are wonderful; and what can I say; only that every woman left as I am, might be blessed with such tried and true friends as you have been to me.

Mrs. Martin died in March 1945. One month later the College assumed complete responsibility for the Surgical Publishing Company and its assets. In December 1946, the College transferred the journal and the assets of the Surgical Publishing Company into a newly created, College-owned, tax-exempt entity, the Franklin Martin Memorial Foundation. The Foundation’s excess revenue from SG&O was donated to the College; for example, $135,000 was donated in 1954, $200,000 in 1960, and $150,000 in 1966 (the latter of which is $1,189,000 in 2014 dollars).

The tax exemption made possible by the foundation was no longer necessary by 1992, so the foundation was dissolved and the College took over the journal. Two years later its name was changed to the Journal of the American College of Surgeons (JACS), and, in 1998, Elsevier, a respected publisher of academic journals, took over management of JACS, while the College retained ownership and editorial control.

To this day, the Martins’ gift to the College, certainly among its largest, was a gift that keeps on giving, enabling the leadership, in Mrs. Martin’s words, “to carry it (the College) to new and higher planes of idealism for the happiness of mankind and the betterment of humanity.”

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Surgical site infections (SSIs) occur in an estimated 2 percent to 5 percent of patients undergoing inpatient operations. Each year, approximately 300,000 SSIs occur in the U.S. Because SSI remains a serious complication for surgical patients, Joint Commission Resources (JCR) has participated in a new initiative designed to help reduce this type of infection.

**Hospital Engagement Networks**
As part of the federal Partnership for Patients, JCR was one of 26 Hospital Engagement Networks (HENs) formed in 2012 to work at the national, regional, state, or institutional level to reduce harm to patients and to improve the safety and quality of health care.

New preliminary data from the U.S. Department of Health and Human Services (HHS) showed a 9 percent decrease in patient injuries in hospitals in 2012 compared with a 2010 baseline, and an 8 percent decrease in Medicare fee-for-service 30-day readmissions. The data also showed improvement on a range of measures for health care-associated infections (HAIs) and conditions, including for SSIs. HENs with other partners, including quality improvement organizations, the hospital Value-Based Purchasing program, the Centers for Disease Control and Prevention, and other groups and agencies, have worked intensively to achieve these reductions.

**Effectiveness of JCR HEN**
Over the last two years, the JCR HEN, which currently comprises 46 hospitals, has made addressing SSIs a top priority. In aggregate, the JCR HEN rate for SSIs continues to decline. As of September 8, 2014, 17 hospitals have shown a significant reduction from baseline (or have consistently had a rate of zero), and 13 of those institutions have achieved a 40 percent reduction or better. The 40 percent reduction reflects the relative percent change between the hospitals’ performance for the first half of 2014 compared with their performance from January of 2010 through April of 2012.

Hospitals in the JCR HEN were able to select the outcome measure they wanted to collect. Of the 17 improving hospitals, 14 collected a measure focused on surgical patients with an uninfected operative wound and the remaining four selected a measure that addressed SSIs for colorectal surgery.

According to HHS, several other HENs also were successful in tackling SSIs. For example, the Healthcare Association of New York State has shown a 28 percent reduction in SSI rates for hip prosthesis. In addition, the Hospital & Healthsystem Association of Pennsylvania has shown a decrease in SSI rates for several procedures—cardiac artery bypass graft, hip replacement, knee replacement, and abdominal hysterectomy—with a combined reduction of 47 percent.

The JCR HEN began its efforts to reduce SSIs by leading an all-day workshop that included JCR consultants and an interdisciplinary team of individuals from surgical nursing, infection control, pre-anesthesia testing, and the post-anesthesia care unit. Together, they completed a strengths, weaknesses, opportunities, and
The JCR HEN began its efforts to reduce SSIs by leading an all-day workshop that included JCR consultants and an interdisciplinary team of individuals from surgical nursing, infection control, pre-anesthesia testing, and the post-anesthesia care unit.

Best practices revealed
As a result of these combined efforts, the JCR HEN identified and recommended the following best practices and strategies to target SSIs:

- Consistently provide case-specific feedback to surgeons through continuous surgical quality improvement meetings, surgical governance, and one-on-one meetings
- Have senior leadership and physicians participate in steering operating room SSI reduction team meetings
- Involve the chief financial officer in cost-per-case analysis and instrument purchase justification
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JCR’s work with its HEN hospitals continues to expand. The project has grown from an original cohort of 32 hospitals in 2012 to 46 in 2014. In addition, the project’s focus has expanded from the 10 original HAIs (including SSIs) to include clostridium difficile, worker safety, sepsis, health care disparities, and pediatric safety. To sustain improvement, JCR will remain committed to its SSI-related efforts even after the Partnership for Patients project ends.

For more information on the JCR HEN, go to http://www.jcrinc.com/about-jcr/hospital-engagement-network/.

REFERENCES
Last month, this column highlighted alcohol use in trauma patients, including a smaller group of chronic drinkers. This subgroup was prone to exhibiting alcohol withdrawal symptoms, which, if left untreated, could progress into delirium tremens (DTs).* Delirium tremens is Latin for “shaking frenzy,” a condition also referred to as the horrors, the bottle ache, quart mania, gallon distemper, barrel fever, the shakes, or the fear.†

**DTs**

Alcohol withdrawal presents with a spectrum of symptoms. The most severe alcohol withdrawal symptoms are DTs, which involve sudden and severe mental or nervous system changes and are most common in people with a prior history of alcohol withdrawal. Typically, individuals who are prone to develop DTs have a daily consumption of four to five pints of wine, seven to eight pints of beer, or one pint of hard alcohol for a period of several months. DTs are also seen in those individuals who have had an alcohol habit for longer than 10 years.‡

Symptoms most commonly arise 48-96 hours after the last drink; however, they have been reported to occur as many as seven to 10 days after the last drink. These symptoms quickly get worse and may include body tremors, change in mental function, agitation, confusion, delirium, fear, hallucinations, quick mood changes, restlessness, auditory and visual sensitivity, and stupor.‡ Seizures, when they occur, are most common in the first 12-48 hours after the last drink, are more common in people with past complications from alcohol withdrawal, and are generalized tonic-clonic in nature. (Tonic-clonic seizures are what many people think of when they hear the word “seizure.” An older term for them is “grand mal.” As implied by the name, they combine the characteristics of tonic seizures and clonic seizures.)

**DTs and trauma patients**

To examine the occurrence of injuries in which DTs occurred, admissions medical records in the National Trauma Data Bank® (NTDB®) research dataset for 2013 were searched using the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) diagnoses codes.

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Specifically searched were records containing diagnosis Code 291.0, alcohol delirium tremens. A total of 289 records containing a diagnosis of DTs were found; 282 of these records contained a discharge status, including 161 patients discharged to home, 45 to acute care/rehab, and 66 sent to skilled nursing facilities; 10 died. Approximately 88 percent of these patients were male, on average 54.2 years of age, had an average hospital length of stay of 16 days, had an intensive care unit length of stay of 8.8 days, had an average injury severity score of 11.9, and were on a ventilator for an average of 8.8 days. This group of DT patients had a similar ISS to the alcohol withdrawal patients reported last month. However, the length of stay for this group was 30 percent longer, and their mortality rate was three-fold greater. (See figure, this page.)

The association between alcohol and injury is well known to the trauma community. Clinically, we are able to treat these patients’ injuries and support them through the DTs. Resources exist at many levels to offer assistance to those individuals with chronic alcohol problems. However, it is important to first identify those patients in need of help. A primer titled Alcohol Screening and Brief Intervention (SBI) for Trauma Patients, authored by the American College of Surgeons Committee on Trauma, The U.S. Department of Health and Human Services, and the Department of Transportation can be accessed at https://www.facs.org/~media/files/quality%20programs/trauma/publications/sbirtguide.ashx.

Throughout the year, we will be highlighting NTDB data through brief reports in the Bulletin. The National Trauma Data Bank 2013 Annual Report is available on the ACS website as a PDF file at www.ntdb.org. In addition, information about how to obtain NTDB data for more detailed study is available on the website. To learn more about submitting your trauma center’s data, contact Melanie L. Neal, Manager, NTDB, at mneal@facs.org.

Acknowledgment
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Andrew L. Warshaw, MD, FACS, FRCSEd(Hon), installed as 95th President of the ACS

Andrew L. Warshaw, MD, FACS, FRCSEd(Hon), surgeon-in-chief emeritus, Massachusetts General Hospital (MGH), and the W. Gerald Austen Distinguished Professor of Surgery at Harvard Medical School, Boston, MA, was installed as the 95th President of the American College of Surgeons (ACS) during Convocation Ceremonies, which opened the ACS Clinical Congress, Sunday, October 26, at the Moscone Center, San Francisco, CA.

Dr. Warshaw became a Fellow of the College in 1974. Since then, he has served the College in various leadership capacities, including as Chair of the Health Policy and Advocacy Group (2007–2014) and ACS Treasurer (2007–2013). He was also First Vice-President (2004–2005).

Additionally, Dr. Warshaw has served on multiple ACS Board of Regents’ Committees, including the Finance Committee (2007–2013), the Honors Committee (2004–2013), and the Research and Optimal Patient Care Committee (2004–2005). He also served on the ACS Board of Governors (1997–2003) and in that capacity, chaired the Governors’ Committee on Socioeconomic Issues (1999–2003); he continues to serve as an ex officio member of the committee. As a leader of the Governors’ Committee on Socioeconomic Issues, he initiated the creation of the ACS Professional Association’s political action committee (ACSPA–SurgeonsPAC) and the surgical volunteerism activities that have evolved into the ACS Operation Giving Back program (OGB). OGB facilitates domestic and international humanitarian outreach among surgeons of all specialties, at all stages of their careers.

A graduate of Harvard College and Harvard Medical School, Dr. Warshaw completed his residency training and was a research fellow in gastroenterology at MGH. He also completed a fellowship at the National Institute for Arthritis and Metabolic Diseases, and was a clinical associate in the section on gastroenterology of the National Institutes of Health.

Since 1972, he has been on staff at MGH and on the faculty of Harvard Medical School. In 1987, he became professor of surgery at Harvard and, in 1997, the W. Gerald Austen Professor of Surgery at Harvard Medical School, and surgeon-in-chief and chairman of the department of surgery at MGH.

Dr. Warshaw is Past-President of the Massachusetts Chapter of the ACS (1991–1992) and has been an active member of the College’s Women in Surgery Committee (2001–2004), the Surgical Research Committee (1988–1993), the Committee on Video-Based Education (1983–1993), and the Medical Motion Pictures Committee (1985–1989).

Dr. Warshaw is an eminent researcher whose activities have led to significant contributions to the field of pancreatitis and pancreatic cancer. His clinical interests have centered on diseases of the pancreas and gastrointestinal tract, with a focus on surgical oncology. His efforts in this field have afforded him the Lifetime Achievement Award of the American Pancreatic Association, the Ewing Medal from the Society of Surgical Oncology, and the Master Educator Award from the Society for Surgery of the Alimentary Tract. He is the founder and director of the Andrew L. Warshaw Institute for Pancreatic Cancer Research at MGH, which develops novel, comprehensive diagnostic and treatment options for pancreatic cancer.

In addition to his leadership within the ACS, Dr. Warshaw has been president of several other surgical societies, including the Society for Surgery of the Alimentary Tract, the International Association
of Pancreatology, the New England Surgical Society, the Halsted Society, the Boston Surgical Society, the Society of Surgical Chairs, and the American Pancreatic Association. He served on the American Board of Surgery (1985–1993) and as its chairman in 1993.

Dr. Warshaw is a prolific author. He has written more than 450 articles for medical and scientific publications, in addition to more than 200 book chapters and reviews; he has also edited 13 books. Currently, he is the editor-in-chief of Surgery.

**Vice-Presidents**
The ACS Vice-Presidents for 2014–2015 also were installed at the Convocation. Jay L. Grosfeld, MD, FACS, FRCS(Eng)(Hon), FRCSI(Hon), FRCP(S)Glas(Hon), Lafayette F. Page professor emeritus of pediatric surgery and past-chairman, department of surgery, Indiana University School of Medicine, Indianapolis, is First Vice-President; and Kenneth L. Mattox, MD, FACS, distinguished service professor, Michael E. DeBakey department of surgery, Baylor College of Medicine, and chief of staff and chief of surgery, Ben Taub General Hospital, Houston, TX, is the Second Vice-President.

A Fellow of the ACS since 1973, Dr. Grosfeld has served on the ACS Advisory Council for pediatric surgery (1996–2001) and on the Advisory Councils for Surgical Specialties (1989–1994). An ACS Governor from 1985 to 1991, he was a member of the Board of Governors’ Committee on Chapter Relations (1989–1992) and the Committee on Physician Competency (1987–1992). He also served as a senior member on the Committee on Continuing Education (1981–1991) and on the Nominating Committee of the Fellows (1991–1992). He has been president of many surgical associations, including the American Surgical Association and the American Pediatric Surgical Association, and, like Dr. Warshaw, is a former chairman of the American Board of Surgery. Dr. Grosfeld also is editor-in-chief of the *Journal of Pediatric Surgery* and *Seminars in Pediatric Surgery*.

Dr. Mattox has been a Fellow of the ACS since 1975. A dedicated trauma surgeon, he has played an active role on the College’s Committee on Trauma (COT). He has served on the COT’s Emergency Services-Hospital Subcommittee (1983–1990). He also was a member of the COT’s Verification, Review, and Consultation Committee (1990–2000) and an ex officio member of the Education Subcommittee (1993–present). He delivered the Scudder Oration on Trauma at the 2000 Clinical Congress and is program director of the Trauma, Critical Care, and Acute Care Surgery Course and the Disaster Medical Response Course, both of which are sponsored by the ACS and presented each spring in Las Vegas, NV.

In addition, Dr. Mattox has served on the ACS Board of Governors (1985–1991, 1997–2003), playing an active role on the following Governors’ Committees: the Committee on Surgical Infections, as both Vice-Chair (2002–2003) and as a member (1998–2002); the Nominating Committee (2002–2003); and the Committee on Ambulatory Surgical Care (1986–1991). Dr. Mattox also has been a member of the College’s Pre- and Postoperative Care Committee (1982–1986), and the Committee on Medical Devices (1980–1986), which he chaired for three years (1983–1986). Dr. Mattox has been a co-author or co-editor of several prominent surgical texts, including *Trauma, Top Knife: The Art and Craft of Trauma Surgery*, and the *Sabiston Textbook of Surgery: The Biological Basis of Modern Surgical Practice*. ♦
Honorary Fellowship in the American College of Surgeons (ACS) was awarded to six prominent surgeons from Switzerland, Scotland, Hong Kong SAR China, Argentina, Belgium, and Ecuador during the October 26 Convocation ceremonies that preceded the official opening of Clinical Congress 2014 in San Francisco, CA. The granting of Honorary Fellowships is one of the highlights of the Clinical Congress. This year's recipients were as follows:

**Pierre-Alain Clavien, MD, PhD, FACS, FRCSEng, FRCSEd,** medical director, department of visceral and transplant surgery, University Hospital, Zurich, Switzerland, has contributed significantly to the understanding of basic mechanisms in liver disease, especially in the areas of organ preservation, ischemia reperfusion, liver regeneration, and cancer. He developed predictive scores for outcomes of liver operations as well as the Clavien-Dindo classification system used in the diagnosis and treatment of hepatopancreato-biliary (HPB) diseases. He established the Swiss HPB Center, which focuses on the diagnosis and treatment of HPB diseases.

**Alberto Raul Ferreres, MD, PhD, FACS, FRCSEd,** is a professor of surgery and chairman, director of the general surgery residency training program at the Carlos Bocanlandro Hospital, and director of the training center for minimally invasive and endoscopic surgery at the University of Buenos Aires, Argentina. He was an ACS International Guest Scholar in 1991 and trained in ethics at the University of Chicago, IL. He has maintained an interest in public health policy and management, professional liability and patient safety, and surgical error, receiving numerous scholarships and awards in these areas from the National Ministry of Health and the National Academy of Medicine in Argentina. He is president of the ACS Argentina Chapter.

**O. James Garden, BSc, MB, BCh, CBE, MD, FRCSGlas, FRCSEd, FRSE,** is Regius Professor of Clinical Surgery and Honorary Consultant Surgeon, HPB surgical services, Royal Infirmary of Edinburgh, the editor-in-chief of HPB Surgery, and chair of the British Journal of Surgical Society, Ltd. He led the establishment of the Scottish Liver Transplantation Programme and performed the first successful liver transplant in Scotland in 1992 and is considered one of the world’s preeminent specialists in HPB diseases and liver transplantation. He was appointed Surgeon of the Queen of Scotland in 2005. He led the development of the masters in surgical sciences degree that forms part of the collective venture between the University of Edinburgh and the Royal College of Surgeons of Edinburgh.

**Antoon (Toni) Lerut, MD, PhD, MPH, FACS,** is a professor at UZ Leuven, an academic hospital in Leuven, Belgium. He established an excellent reputation in thoracic and esophageal surgery through his seminal contributions to the literature on esophageal cancer. Dr. Lerut is the co-editor of Pearson’s Thoracic and Esophageal Surgery, and chairs the European Union of Medical Specialists Section of Thoracic Surgery. Since his retirement, he has been a visiting scholar at universities in the U.S., China, and Turkey. He has developed a teaching project in collaboration with physicians in Africa to treat children with caustic strictures.

**Chung-Mau Lo, MB, BS, FACS,** Chin Lan-Hong Professor in Hepatobiliary and Pancreatic Surgery, and head, department of surgery, University of Hong Kong, SAR China, has pioneered living related liver transplantation in Asia, and he and his team were the first to perform a right lobe living related transplant in 1996. In addition, he has made important contributions to the treatment and detection of hepatocellular carcinoma and use of adjuvant therapy. He was a principal force in founding and leading the new department of surgery at the University of Hong Kong-Shenzhen Hospital in China in 2012. A prolific investigator,
he has received more than $10 million in peer-reviewed grants studying liver graft injury.

Edgar Rodas, MD, FACS, is president and founder of the Cinterandes Foundation, which since 1990 has equipped volunteer surgeons from around the world with a mobile surgery unit that brings previously unavailable surgical techniques to remote areas of Ecuador. Since 1994, more than 7,200 operations have been performed in the mobile operating room with excellent results. He has served as president of the Ecuadorian section of Amnesty International for two terms and as Minister of Health of Ecuador. He also founded the medical school at the University of Azuay in Cuenca, serving as dean for six years. He received the ACS Surgical Humanitarian Award in 2009.

Presenting on behalf of the College were Steven M. Strasberg, MD, FACS; E. Christopher Ellison, MD, FACS; L.D. Britt, MD, MPH, D.Sc(Hon), FACS, FCCM, FRCSEng(Hon), FRCSEd(Hon), FWACS(Hon), FRCSI(Hon), FCS(SA)(Hon), FRCSGlasc(Hon);

Richard J. Finley, MD, FACS, FRCSC; Ronald J. Busuttil, MD, PhD, FACS; and Ronald Merrell, MD, FACS.

Sir Rickman Godlee, President of the Royal of College of Surgeons of England, was awarded the first Honorary Fellowship in the College during the ACS’ first Convocation in 1913. Since then, 447 internationally prominent surgeons, including the six chosen this year, have been named Honorary Fellows of the ACS. Following are the citations presented at the Convocation.

THE ACS ADVOCATE

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Mr. President, it is my honor to present to you a distinguished surgeon, surgical scientist, and surgical thought leader, Prof. Pierre-Alain Clavien of Zurich, Switzerland, for Honorary Fellowship in the American College of Surgeons.

One does not usually associate Switzerland with the production of fine wine, but Professor Clavien comes from a family in Valais that does just that. Given the energy our honoree applies to his work, I believe if he had chosen to follow in the family business, we would be consuming le vin Clavien ce soir.

Fortunately for us and those patients with liver disease, he chose to attend medical school in Geneva, completed a surgical residency in Basel, and then crossed the Atlantic to get his PhD and complete a clinical fellowship in hepatobiliary and pancreatic (HPB) surgery at the University of Toronto, ON. When his PhD work on organ preservation was presented, David C. Sabiston, Jr., MD, FACS, who was in the audience, offered Professor Clavien a job as head of Duke’s liver transplantation service on the spot. Professor Clavien remained at Duke for six years, rising to the position of professor and head of transplantation and HPB surgery. In 2000, he returned to Switzerland to become the head of surgery at the University of Zurich, a chair occupied 100 years before by Emil Theodor Kocher. To Swiss surgeons, that’s the top of the Alps.

Professor Clavien introduced the American system of sub-specialization in general surgery to Switzerland and established the Swiss HPB Center in Zurich, which has become one of the most important in Europe and draws patients from all over Europe and the Middle East.

He and his team have made great contributions to our understanding of basic mechanisms in liver disease, especially in the areas of organ preservation, ischemia reperfusion, and liver regeneration, and these studies have been applied to the care of patients. He has been a leader in bringing the methods of evidence-based medicine to the surgical profession. Several of his basic studies have been brought to randomized trials, and he has used these trials to settle important technical questions.

Professor Clavien has developed predictive scores for outcomes of liver surgery, as well as the widely used Clavien-Dindo system for grading severity of complications. He is at the forefront of developing new methods for defining the state of the art in surgical procedures through consensus conferences and applying those methods to answering difficult clinical questions, such as how to treat liver neuroendocrine tumors and how to choose a surgery department chair. Professor Clavien has been associated with publishing almost 500 peer-reviewed papers and several books, holding multiple leadership positions, and educating 50 research and clinical fellows.

If this summary sounds a bit like a precision Swiss watch, let me assure you that Professor Clavien is quite human. He has a wonderful wife, Sylvie, an ophthalmologist; three lovely children; and a good sense of humor often manifested in his questioning.

Mr. President, Professor Clavien of Switzerland is a surgeon completely devoted to the improvement of care for the surgical patient. Therefore, it is a distinct honor for me to present my student, my colleague, my teacher, and my friend Pierre for Honorary Fellowship in the American College of Surgeons.
Mr. President, it is my distinct privilege to present Prof. Alberto Raul Ferreres of Buenos Aires, Argentina, for Honorary Fellowship in the American College of Surgeons (ACS).

Professor Ferreres was born and raised in Buenos Aires. His father, Hernando, who is 91, was a publisher, and his mother, Evangelina, was a Cuban native and an accountant. Professor Ferreres was the first member of his family to receive an advanced degree. He attended medical school at the University of Buenos Aires, where he met his wife, Graciela, as a third-year medical student. She is now a pediatric ophthalmologist. He trained in general surgery and surgical oncology at the University of Buenos Aires Hospital and Clinics from 1980 to 1987. He received a doctor of jurisprudence from the University of Buenos Aires School of Law in 1987, a masters of public health from Salvador University, Buenos Aires, in 1995, and a masters in health administration in 1996, from Austral University, Buenos Aires. Professor Ferreres was an International Guest Scholar of the ACS in 1991.

In 2002, he was appointed professor and chair of the department of surgery at the University of Buenos Aires. Professor Ferreres also serves as director of the general surgery residency training program at the Carlos Bocalandro Hospital and the Training Center for Minimally Invasive and Endoscopic Surgery at the University of Buenos Aires. He has also maintained an avid interest in public health policy, surgical ethics, and patient safety through his training at the University of Chicago, IL, and Virginia Commonwealth University in Richmond, VA. He has served on the steering committee of the World Health Organization for Patient Safety and has been recognized by the National Ministry of Health and National Academy of Medicine in Argentina. Professor Ferreres serves as an advisor to the Ministry of Health for Buenos Aires.

He has published more than 100 scientific articles in peer-reviewed journals, 22 book chapters, and three textbooks. He was elected to the Argentine Chapter of the ACS, as well as the Argentine Surgical Association, Argentine Surgical Academy, Society for Surgery of the Alimentary Tract, Society of American Gastrointestinal and Endoscopic Surgeons (SAGES), International Society of Surgery (ISS-SIC), International Society of Digestive Surgery (ISDS), Latin American Surgical Federation, and Latin American Association of Endoscopic Surgeons. He has served as visiting professor of surgery in the U.S., Canada, and Europe.

Professor Ferreres received the SAGES recognition of excellence award. He is the president-elect of the ISDS and President of the Argentine Chapter of the ACS. He is a member of the executive committee of the ISS-SIC and the International Relations Committee of the ACS. Professor Ferreres is also an honorary member of surgical societies in Chile and Ecuador, and of the American Surgical Association.

He and Graciela have three boys: Alvaro (30), Augusto (28), and Alejo (25). The whole family enjoys sailing and favors the beautiful landscape of the Rio de la Plata.

Mr. President, Professor Ferreres is a distinguished international leader in surgical gastroenterology, minimally invasive surgery, and medical ethics. He is known as a kind and gentle person whose moral fiber is strong and emblematic of the principles of the American College of Surgeons. I am honored to present him for Honorary Fellowship. ♦
President Pellegrini, it is my privilege to present to you and this assembly a renowned and revered surgeon and clinical scientist, **Prof. O. James Garden** of Edinburgh, Scotland, for Honorary Fellowship in the American College of Surgeons (ACS).

Professor Garden embodies all that is good about the surgical profession and its leaders. As the Regius Professor of Clinical Surgery (a position previously held by Professor Joseph Lister) and past-head of the School of Clinical Sciences and Community Health at the University of Edinburgh, he is considered by many to be the consummate ambassador for international surgery.

A graduate of the University of Edinburgh (1977), Professor Garden trained in Glasgow and Edinburgh, Scotland, and Paris, France, and is considered one of the preeminent specialists in hepatobiliary, pancreatic, and liver transplantation surgery. He led the establishment of the Scottish Liver Transplantation Programme and performed the first successful liver transplant in Scotland in 1992. Professor Garden is particularly interested in the management of both benign and malignant diseases of the liver and biliary tract, including the surgical treatment of complex injuries to the bile duct.

Professor Garden has edited 16 books and has written more than 75 book chapters and hundreds of peer-reviewed scientific articles. He is a past-associate editor of the *World Journal of Surgery*, the current editor-in-chief of *HPB Surgery*, and chair of the *British Journal of Surgery Society*, Ltd. Professor Garden was the chair of the Royal College of Surgeons of Edinburgh’s Quincentenary Congress in 2005. In 2006, he was chair of the 7th World Congress of the Independent Hospital Pricing Authority in Edinburgh and has recently served as president of that association. The long list of honors, accolades, and awards that have been bestowed on our distinguished colleague includes the Chancellor’s Award for Teaching by the Duke of Edinburgh; Honorary Secretary of the James IV Association of Surgeons; Honorary Fellow of the Royal Australasian College of Surgeons, the Royal College of Physicians and Surgeons of Canada, and the American Surgical Association; and honorary memberships in many other international surgical societies.

One of his most enduring legacies is in the area of surgical education. Professor Garden led the development of the masters in surgical sciences (MSc) degree that forms part of the collaborative venture with the Royal College of Surgeons of Edinburgh. The MSc and the resulting ChM series of programs in general surgery, trauma, orthopaedics, and urology have recruited more than 600 students in the last six years. In 2013, 297 trainees applied for entry. The programs received the e-Learning Award—Best Online or Distance Learning Programme—Education—in November 2010 and secured the Queen’s Anniversary Prize for Higher and Further Education in November 2013. The programs now support and provide free academic training for several trainees in disadvantaged parts of the world, including Malawi and Sierra Leone.

I have no doubt that this ceremony of awarding an honorary fellowship has received the royal sanction from Her Majesty, for Professor Garden was appointed Surgeon to Her Majesty the Queen in Scotland in 2004. He also was recently made Commander of the British Empire in the Queen’s New Year’s Honours List.

President Pellegrini, we warmly welcome Professor Garden and his lovely wife, Mandy, along with their children, Stephen and Katherine, to the ACS family. I am honored to present him for Honorary Fellowship.
Mr. President, it is my honor to present to you a distinguished surgeon and leader, Prof. Toni Lerut of Leuven, Belgium, for Honorary Fellowship in the American College of Surgeons.

Professor Lerut received his medical degree and training in general surgery at the Catholic University of Leuven, Belgium. Early in his career, he was attracted to thoracic and esophageal surgery, first serving as a registrar in thoracic surgery with Mr. Ronald Belsey in Bristol, UK, and then completing a guest scholarship with David Skinner, MD, at the University of Chicago, IL.

In 1976, Professor Lerut returned to the department of general surgery at the Catholic University of Leuven under the directorship of Prof. J.A. Gruwez, and there he developed an interest in transplantation. He quickly established his reputation as an excellent clinical and academic esophageal surgeon by publishing seminal contributions on esophageal cancer. After becoming a professor and head of general thoracic surgery at the university in 1989, he recruited bright, young, academic thoracic surgeons to help him establish the leading European center in thoracic surgery. Professor Lerut’s reputation as a clinician scientist and teacher attracted more than 70 international thoracic surgery fellows and PhD students. He has given numerous named lectures and authored more than 270 articles in international peer-reviewed journals and 80 book chapters. He is co-editor of Pearson’s Thoracic and Esophageal Surgery, the leading reference work in the field.

Professor Lerut has been the president of the European Association for Cardio-Thoracic Surgery, the European Society of Thoracic Surgeons, the International Society of Diseases of the Esophagus, and the European Surgical Association. He is currently the chair of the European Union of Medical Specialists Section of Thoracic Surgery. Through these affiliations, he has increased the profile of European thoracic surgery.

Professor Lerut has been awarded honorary fellowships in 14 prestigious organizations, including the American Association of Thoracic Surgery, the American Surgical Association, the European Society of Thoracic Surgeons, the German Society for General and Visceral Surgery, the Royal College of Surgeons in Ireland, and the Royal College of Surgeons of England.

Since his retirement, he has been a visiting scholar at the Brigham and Women’s Hospital, Boston, MA; Harvard Medical School, Cambridge, MA; the University of Pittsburgh, PA; the University of Southern California, Los Angeles; Marmara University, Istanbul, Turkey; and Fudan University, Shanghai, China. In collaboration with physicians in Mali, The Gambia, Guinea, and Burkina Faso, he developed a teaching project to successfully treat children with caustic strictures.

Despite these accomplishments, Professor Lerut remains a humble gentleman who is beloved by his patients, students, and colleagues. As is the case with most great leaders, he has a supportive family behind him, including his wife, Gertji, and three children: Katja, a midwife; Philip, a vascular and thoracic surgeon; and Bob, an otolaryngologist. In his free time, he enjoys studying the history of medicine, traveling, the fine arts, classical music, and drinking fine wine with friends.

Mr. President, Professor Lerut is the role model for an academic thoracic surgeon. He is a respected technical surgeon, an accomplished scientist, an articulate teacher, a thoughtful leader, and, most of all, a caring physician. It is my great pleasure to present Prof. Toni Lerut for Honorary Fellowship in the American College of Surgeons.
President Pellegrini, it is my distinct honor to present to you a truly renowned hepatobiliary and transplant surgeon, Prof. Chung-Mau Lo, better known as CM Lo, for Honorary Fellowship in the American College of Surgeons.

I have known Professor Lo for more than 20 years, beginning with his time as a visiting research fellow in the Dumont-University of California, Los Angeles, Liver Cancer Center transplant center from January to December 1993. What he has accomplished since that time and the impact on this field are truly remarkable.

Professor Lo received his surgical training at Queen Mary Hospital at the University of Hong Kong and was promoted to professor of surgery there in 1999. His academic career took a meteoric trajectory, and in 2011, at the age of 42, he was made professor and chair of hepatobiliary surgery at the University of Hong Kong and chair of the department of surgery at Queen Mary Hospital. Furthermore, because of his visionary progress, he was a principal force in founding and leading the new department of surgery at the Shen-Chen Hospital in mainland China in 2012.

Professor Lo is unquestionably a triple-threat academic leader in the surgical field; he is an extraordinary surgeon, an outstanding teacher, and a prolific investigator. Among other accomplishments, he pioneered living related liver transplantation in Asia, and he and his team were the first to perform a right lobe living related transplant in 1996. The initial series of seven such cases was reported to the American Surgical Association in 1997. Today, Professor Lo and his associates have performed more than 300 cases, with excellent results. In addition, he has made numerous important contributions to the treatment of patients with hepatocellular carcinoma, made innovative advances in early detection and use of adjuvant therapy, and improved technical advances of large tumors using a novel anterior approach.

Professor Lo has been a prolific investigator and has received more than $10 million in peer-reviewed grants studying liver graft injury. He has been an outstanding mentor for residents and fellows and has been the principal supervisor for nine PhD students studying important areas, such as stem cell therapy for liver failure and genetic signatures as prognostic indicators for acute-phase hepatic injury and tumor invasiveness.

His service to professional societies has been exemplary, and he has served as president of the International Liver Transplant Society and the International Society for Digestive Surgery, and is an honorary member of both the American Surgical Association and the European Surgical Association.

In addition to his extraordinary academic and surgical accomplishments, Professor Lo is devoted to his wife, Amy C.W. Lo, and their two children, Arthur and Carmen. He is also an avid sports player.

Mr. President, I am honored to be able to present Prof. Chung-Mau Lo to you for Honorary Fellowship in the American College of Surgeons. Dr. Lo is an internationally acclaimed surgeon who has been instrumental in advancing clinical and investigational surgery worldwide. ♦
Mr. President, it is my honor to present to you a distinguished surgeon and academic, Prof. Edgar Rodas of Cuenca, Ecuador, for Honorary Fellowship in the American College of Surgeons (ACS).

Professor Rodas studied at the University of Cuenca and, after a tour with Project Hope in Guayaquil in 1964, was invited to the U.S., where he completed his surgical residency at Washington Hospital Center in Washington, DC. He then returned to Cuenca and rose through the ranks at the University of Cuenca, eventually becoming vice-rector from 1985 to 1990.

First and foremost, he has always been an exemplary clinician. Professor Rodas has distinguished himself in the area of humanitarian causes, which includes establishing Cinterandes Foundation for mobile surgery in Ecuador. The foundation has performed thousands of procedures since its implementation in 1990. The program equips highly qualified volunteer surgeons from Ecuador and abroad with strict evidence-based protocols, which have resulted in enviable clinical outcomes, to bring previously unavailable advanced surgical services to the poor in the most remote parts of Ecuador and integrate primary care in a coherent and seamless medical enterprise. The clinical outcomes have been carefully chronicled, and the enviable results have been widely published.

Professor Rodas served as Minister of Health for Ecuador and has been honored by many international organizations. His program in mobile surgery has been a template for other countries and continues to lead the way in volunteerism and humanitarian surgery. He has been visiting professor at many departments in the U.S. and maintains a cordial and highly productive interaction with his U.S. colleagues. He received the ACS Surgical Humanitarian Award in 2009.

He has been a strong and effective voice for academic surgery in Ecuador and beyond throughout his career. He was founder of the medical school at the University of Azuay and served as dean from 2003 to 2009. If I could praise just one of his characteristics, it would be his poise. Professor Rodas attended an all-night soliloquy by Fidel Castro with other health ministers without losing attention. He survived a Maoist takeover of his medical school and maintained a cordial and highly productive interaction with his U.S. colleagues. He received the ACS Surgical Humanitarian Award in 2009.

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Mr. President, Professor Rodas is a role model for academic surgeons and young people who want to serve others in profound and challenging ways. I feel privileged to present him for Honorary Fellowship in the American College of Surgeons.♦
Clifford Y. Ko, MD, MS, MSHS, FACS, Director of the American College of Surgeons (ACS) Division of Research and Optimal Patient Care and National Surgical Quality Improvement Program (ACS NSQIP®), greeted attendees at the 10th National Conference of ACS NSQIP participants with numbers that convey the initiative’s achievements. According to Dr. Ko, more than 1,200 participants were at the 2014 National Conference, July 26–29, at the Midtown Hilton, New York, NY, breaking the meeting’s attendance records.

When ACS NSQIP launched in 2004, 18 hospitals had contracted with the quality improvement program. “Today we are in approximately 600 hospitals worldwide, including 59 pediatric hospitals and 43 international hospitals,” Dr. Ko said.

Studies show that each year, ACS NSQIP, a surgical quality program that began in the Veterans Affairs (VA) hospital system, has the potential to prevent, on a per-hospital average, 250 to 500 surgical complications in the U.S., save 12 to 36 lives, and reduce hospital costs by millions. “We have applied rigorous and believable data and taken it to new levels,” Dr. Ko said. To date, 83 percent of ACS NSQIP hospitals have been able to decrease their complications rates by statistically significant levels. “We know that collaborative are a great way to learn, and we expanded our international reach.”

ACS NSQIP data allow hospitals to compare their quality improvement results with those of other institutions that report to the national database. These comparison data allow them to respond to complications that may reflect broader systemic problems. Trained reviewers collect and analyze the data, which is risk-adjusted to account for differences in patients’ ages, severity of illness, and the complexity of the operations performed.

ACS NSQIP differs from other surgical quality improvement programs in that it is a surgeon-driven program that uses clinical rather than administrative data and 30-day patient follow-up, Dr. Ko said. Dr. Ko added that while rigorous data collection is essential, it alone cannot lead to sustained improvements. “We’ve learned that you need to continue to act on the data,” he said.

Process improvement
At a preconference session on leveraging ACS NSQIP for quality improvement, John M. Morton, MD, MPH, FACS, FASMBS, chief of bariatric and minimally invasive surgery, Stanford University School of Medicine (SUSM), CA, led a discussion on robust process improvement (RPI), a performance improvement (PI) initiative of The Joint Commission. RPI comprises a set of strategies, tools, methods, and training programs that enhance the efficiency of hospital business practices. The focus is on recognizing the customer’s voice, defining factors critical to quality, using data and data analysis to improve service, and enlisting stakeholders and process owners to create and sustain solutions.

Craig T. Albanese, MD, MBA, FACS, vice-president, quality and performance improvement at Lucile Packard Children’s Hospital, SUSM, spoke on the use of “lean” concepts in health care. Lean initiatives, which focus on using fewer resources while adding more value for customers, require a long-term commitment, Dr. Albanese said.

He warned that institutions that turn away from some form of PI will be forced to respond to continual service failures. In Lucile Packard Children’s Hospital’s case, the lean method supported the institution’s efforts to view the patient as the customer and to establish high-quality service as the norm. Service to patients includes phone
and office etiquette, listening to patients’ specific issues, and helping them to navigate the hospital’s complicated setting.

**Where is surgery headed?**

In a keynote speech during the opening session, then-ACS President-Elect Andrew L. Warshaw, MD, FACS, FRCSEd(Hon), surgeon-in-chief emeritus, Massachusetts General Hospital (MGH), and the W. Gerald Austen Distinguished Professor of Surgery at Harvard Medical School, Boston, addressed the question: Surgery—Where Are We Going?

Over the course of a surgical career that began in 1972, devoted to the “hidden organ of the pancreas,” Dr. Warshaw said he has witnessed a revolution in surgical care. “The surgeon is no longer the sole expert. Today we take care of patients in a totally multidisciplinary fashion,” he noted. Gastroenterologists, hematologists, radiologists, pathologists, oncologists, and geneticists are now part of the surgical team, and the team and patients take part in the decision-making process.

“What will surgery of the future look like?” Dr. Warshaw asked. “Technology will continue to advance, and we will see better imaging and fewer invasive procedures. Our practices will be science-based and will make much better use of biological and genetic tools, organ replacement, and tissue engineering,” he predicted.

In the next 50 years, Dr. Warshaw added, science will continue to unravel a number of mysteries, including how lifestyle changes can prevent pancreatic cancer. “The future will see a continued emphasis on patient outcomes and on ACS NSQIP,” he said, noting that MGH uses ACS NSQIP every day to benchmark its performance against other leading hospitals.

“Most surgeons do a little bit of everything, but ultimately our job is to provide the right care, at the right place, at the right time.” Patient outcomes are the essential measure, Dr. Warshaw said, and today, procedure-specific outcomes based on data guide surgical decisions. “Always remember that the outcome that matters most to patients is survival,” he said.

**Lessons in improving care**

Many conference speakers offered best practices for building a culture of safety and using ACS NSQIP as the foundation for quality improvement. At a session on reducing surgical site infections (SSIs), J. Michael Henderson, MB, BCh, FACS, chief quality officer, Cleveland Clinic Health System, OH, said, “What we know about SSIs is that they are still too high, and there is too much variation in monitoring and reporting them. But with ACS NSQIP data, we are moving in the right direction. Reducing SSIs is a universal goal for all surgeons, and ACS NSQIP offers the best data for action. We know now that collaboratives can accelerate the process and that national campaigns can be successful.”

Accordingly, Dr. Henderson answered “yes” to all of the following questions: Can we do better for our surgical patients? Do we know what to do? Is ACS NSQIP the best tool to drive change? Is it time for an SSIs national campaign? A national campaign against SSIs would promote to the nation’s more than 6,000 hospitals an increased level of intolerance for all types of SSIs.

Erin S. DuPree, MD, FACOG, chief medical officer and vice-president of The Joint Commission Center for Transforming Healthcare, described the center’s targeted solutions tool for reducing SSIs. The Joint Commission used ACS NSQIP data in a collaborative of seven U.S. hospitals targeting colorectal SSIs in patients from preadmission to 30 days after surgery. The participating hospitals collectively and systematically defined and measured the impact of the problem and then searched for specific causes. The project involved all surgical inpatients undergoing emergency and elective colorectal surgery,
with the exception of trauma and transplant patients and patients younger than age 18. The results: The hospitals reduced superficial SSIs—those infections that occur only in the area of the surgical incision—by 45 percent and reduced all types of SSIs by 32 percent, according to Dr. DuPree. Ultimately, she said, the initiative allowed the hospitals to avoid 135 SSIs and save approximately $3.7 million in treatment costs.

Written policies and procedures do not necessarily provide an accurate assessment of what is occurring at the patient level, Dr. DuPree noted. Therefore, direct observations of the process are vital. The Joint Commission also has developed modules for hand hygiene, which, according to Dr. DuPree, could potentially save one life for every 25 hospital beds; wrong-site surgery, estimated to be as high as 40 to 60 incidences per week in the U.S.; and hand-off miscommunication. Miscommunication is a key element in most adverse events. Robust process improvement, Dr. DuPree concluded, must be educational, and the tools must help the user measure the issue, determine the root problems, and implement changes.

Mark J. Ott, MD, FACS, medical director, surgical services clinical program, Intermountain Healthcare, reported that the not-for-profit health care system, composed of 22 hospitals in Utah and Idaho, 1,000 surgeons, and serving roughly 3 million patients, joined ACS NSQIP in 2011. Project leaders at the hospital trained all levels of staff, from administrators and surgeons to all other operating room (OR) personnel, in quality improvement, a process that took hundreds of hours over the course of many months. They standardized skin preparation methods and employed proper antibiotic timing and weight-based dosing, and re-dosed at three-hour intervals during the operation as needed. They allowed only hospital-supplied scrubs in the OR and stressed the need to cover up or change scrubs when entering and leaving the OR. They re-emphasized proper aseptic techniques for exchanging supplies and kept vendors away from the area.

They then measured outcomes, and today, on an ongoing basis, they feed the results back to staff and physicians. As a result of these efforts, Intermountain experienced a significant and sustained improvement in institutional SSI rates. “We keep monitoring and educating because there’s always a danger you will slide back to your old ways, and you always have new people coming into the system who need to be trained,” Dr. Ott said.
In 1986, after the Space Shuttle Challenger broke into pieces on take-off, ground staff admitted that they had been concerned that below-freezing temperatures might affect the integrity of the solid rockets’ O-rings. Staff members admitted after the disaster that they didn’t speak up out of fear of reproach from their superiors.

“Do you have an elephant in your surgical unit?” Ms. Groah asked. “Do you work with anyone that you do not hold accountable because it is too dangerous to speak up?” A “just” culture, Ms. Groah said, is not a blame-free culture. The culture defines what is acceptable behavior, and errors are evaluated in terms of contributing factors, and accountability is determined in relation to actions.

Accountability needs to be the norm, Ms. Groah told the gathering. “In a positive, healthy environment, leadership strongly promotes accountability, and it is a core value for all employees,” she said. Accountability is patient-centric, and team members have an intrinsic obligation to one another. “There is ongoing education on the culture of safety, a just culture, and continual efforts to sustain the gains.”

“Without accountability, there are missed treatments and medication delays,” Ms. Groah added. “There is reduced productivity, lack of follow-through, poor coordination of care, failure in hand-offs, untoward patient events, clinical changes that are not sustained, and ultimately, an increase in the cost of health care.

“It is important to consider if an individual knowingly violated a policy or procedure, and if the policy and procedures in place were actually workable and correct,” she noted. “In a just culture, there is recognition that human beings make mistakes and that even professionals may develop unhealthy norms. But there is also a fierce intolerance of reckless conduct,” Ms. Groah said.

ACS: Commitment to quality
The ACS has always been committed to quality care. “Throughout our history, when something worked, it became obvious that it should become the standard of care,” David B. Hoyt, MD, FACS, ACS Executive Director, told attendees. “ACS NSQIP is that kind of initiative.”

He noted that the Affordable Care Act (ACA) encompasses a range of regulatory requirements aimed at increasing access to care, reducing costs, and redesigning the delivery system.

“Any discussion of cost and payment in health care is really a discussion of who will assume the risk,” Dr. Hoyt said. Noting that U.S. health care costs are forecast to climb to $4.5 trillion and consume 19.3 percent of the nation’s gross domestic product by the year 2019, Dr. Hoyt stressed the importance of curtailing costs. He noted, however, that surgical costs have remained relatively flat in recent years, with the exception of knee and hip operations.

Dr. Hoyt acknowledged the triple-aim theory of Donald Berwick, MD, former Administrator of the Centers for Medicare & Medicaid Services (CMS), which emphasizes quality and professionalism:

1. improve the experience of care;
2. improve the health of populations; and
3. reduce the per capita costs of health care.

“Quality improvement is the future of medicine,” Dr. Hoyt said. “Quality is measurable, and health care data are essential to the process.” He noted that health care professionals need standards, individualized for patients and backed by research. “It requires the right infrastructure, the right staff levels, specialists, equipment, and checklists,” he said, adding that rigorous data must come from medical charts, supported by research, and verified through external peer review.

Collecting data will be critical for working with the accountable care organizations (ACOs) established in the ACA, Dr. Hoyt said, and will help surgical practices meet emerging trends, such as maintenance of certification and pay for performance mandates. ACOs
consist of doctors, medical groups, hospitals, and other health care professionals who work together to deliver high-quality, coordinated patient care.

**Best practices**

Each year, ACS NSQIP issues a call for abstracts to allow participating hospitals to submit presentation topics on how they have used ACS NSQIP to improve patient care. Awards honored authors in three abstract areas:

- **Resident Abstract:** Lindsay A. Bliss, MD—Perioperative Culture, Organizational Behavior, and Patient Outcomes

- **Surgical Clinical Reviewer Abstract:** Christine Solis, BSN, CLSSBB—Engaging the Hearts and Minds of the Frontline Team in Continuous Daily Surgical Performance Improvement Initiatives: The Journey of One Medical Center

- **Clinical Abstract:** Brian J. Daley, MD, MBA, FACS—Participation in a Statewide Collaborative of Surgeons, Hospitals, and Insurers Leads to Improved Patient Outcomes and Financial Savings in Surgical Care

Dr. Daley reported that the Tennessee Surgical Quality Collaborative has reduced surgical complications by 19.7 percent since 2009, saving at least 533 lives and $75.2 million. The hospital collaborative was formed in 2009 as a partnership of the ACS Tennessee Chapter and the Tennessee Hospital Association’s Center for Patient Safety, with support from Blue Cross Blue Shield’s Tennessee Health Foundation. “Our results show that not only have Tennessee hospitals improved care, but we’ve been able to sustain these improvements over time,” Dr. Daley said. “Our collaborative approach and use of robust clinical outcomes data through ACS NSQIP is an effective model for quality improvement across our state and nationally.”

At an abstract session on vascular surgery and venous thromboembolism (VTE), a surgical team from the department of surgery at Carilion Clinic Roanoke Memorial Hospital, VA, reported their complicated but ultimately successful experience using ACS NSQIP data. The Carilion team determined which patients had VTE and queried the electronic health records to find patients placed in postoperative isolation. Data revealed a predisposition for patients in isolation to develop VTE. The researchers, who noted that VTE rates were low in 2008 but went up sharply in 2010, discovered that a hospital-wide focus on methicillin-resistant staphylococcus aureus (MRSA), a contagious bacteria that can lead to pneumonia and infections of the skin and bloodstream, resulted in several readmissions. The hospital began a universal program of screening and isolating patients who tested positive for MRSA. The rates of MRSA infection dropped, but VTE rates unexpectedly rose, an occurrence that researchers attributed to the absence of movement and lung exercises among isolated patients.

Using ACS NSQIP data, Carilion administrators established designated ambulation areas for isolated patients. They also hired a nurse specialist to gather daily reports on the VTE patients, and they educated patients’ families on the condition.

**ABCs of government regulation**

Frank G. Opelka, MD, FACS, Medical Director of Quality and Health Policy, ACS Division of Advocacy and Health Policy, described the new realities of regulation, key among them that performance measures have become integral to payment. In a session titled Regulatory Update: The Alphabet Soup of Programs and Reporting—Basic Understanding of How ACS NSQIP and ACS Can Help You and Your Hospital, Dr. Opelka noted that CMS, the Office of the National Coordinator for Health Information Technology,
the Patient-Centered Outcomes Research Institute, and the Agency for Healthcare Research and Quality are quickly shifting to new data sources.

Performance measurement is changing, Dr. Opelka noted. Pay-for-reporting is evolving into pay-for-performance, administrative claims are being replaced with clinical data, and process measures replaced by outcome measures. The Physician Quality Reporting System (PQRS) uses a combination of incentives and payments to promote reporting of quality information by eligible professionals (EPs). The creation of the pay-for-reporting program in 2012 allows EPs to qualify for two incentive payments—one for e-prescribing and one for the PQRS. CMS’ Electronic Prescribing (eRx) incentive program was authorized under the Medicare Improvements for Patients and Providers Act of 2008 (MIPPA), and CMS implemented a separate pay-for-reporting incentive program in 2009, to advance quality through safer, more coordinated prescription writing.

Dr. Opelka noted that starting in 2015, the ACA will require the CMS to develop a value-based payment program (VBP) in an attempt to move physician reimbursement toward a system that rewards value of care over volume. With the goal of improving efficiency of care, the VBP program will provide performance information to physicians so they can benchmark themselves against a national standard.

### Changing environment

ACS NSQIP may help to resolve many problems associated with an expensive, overburdened U.S. health care system that continues to underperform, in comparison with systems in other developed nations. Ultimately, health care professionals worldwide strive to save lives and improve patient outcomes. ACS NSQIP provides a path for transforming health care into a reliable, measurable enterprise. Quality improvement is a gradual, deliberate process that requires strong, disciplined leaders and surgeon champions, dedicated team members, and collaboratives that work together to promote quality care and sustain the goals of continuous quality improvement.

Commit to change early, and commit to it often, conference speakers urged attendees. In his keynote address, Dr. Warshaw stressed the point succinctly with a quote from retired Chief of Staff of the U.S. Army, Gen. Eric Shinseki: “If you don’t like change, you’re going to like irrelevance even less.”

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**REFERENCES**


Albert Man-Chung Kwan, MD, FACS, a general surgeon from Clovis, NM, a Past Governor of the American College of Surgeons (ACS), and Past-President and current Secretary/Treasurer of the New Mexico Chapter of the ACS, is the recipient of the 2014 Leonard M. Napolitano, PhD, Award from the University of New Mexico School of Medicine (UNM SOM). The award recognizes alumni who have advocated successfully on behalf of the UNM SOM and its patients through innovation, a commitment to education, and by forging strong public and private partnerships. Since 2011, Dr. Kwan has served as Region 9 Chief of the ACS Health Policy Advisory Council. Dr. Kwan is also a past-president of the New Mexico Medical Society.

Giorgio Di Matteo, MD, FACS, AFCh(Hon), emeritus professor of surgery, Sapienza University, Rome, Italy, was recently elected honorary president of the Italian Society of Surgery.

Andrew S. Klein MD, MBA, FACS, director, Cedars-Sinai Comprehensive Transplant Center, Los Angeles, CA, was recently honored with a “Healthcare Visionary” award from the Los Angeles chapter of the American Liver Foundation for a lifetime of achievement in the field of liver transplantation. Dr. Klein, the Esther and Mark Schulman Chair in Surgery and Transplantation Medicine, has written extensively about liver disease, transplantation, and immunobiology and has helped establish rules and guidelines for the nation’s transplant systems. He is a pioneer in the development of national policies for equitable allocation of available donor organs. He is a former chair of the United Network of Organ Sharing Liver and Intestinal Transplantation Committee, as well as a member of the governing board of the American Association for the Study of Liver Diseases.

Karin Muraszko, MD, FACS, and Shelly D. Timmons, MD, PhD, FACS, FAANS, were recently named honorees of the American Medical Association–Women Physician Section inspirational physician awards. The awards allow physicians to express appreciation for their colleagues—the men and women who have offered their time, wisdom, and support to patients and their fellow physicians.

Dr. Muraszko, chair of the department of neurosurgery, University of Michigan Health
System, Ann Arbor, is a former member of the ACS Advisory Council of Neurological Surgery, and currently serves on the ACS Women in Surgery Committee. She was cited by Aruna Ganju, MD, FACS, Chicago, IL, for her contributions to pediatric neurosurgical care and her role as a national leader in neurosurgery.

Dr. Timmons is attending surgeon, Geisinger Medical Center, Danville, PA; clinical associate professor, Temple University School of Medicine, Philadelphia; and ACS Governor and Chair of the Advisory Council for Neurological Surgery. Dr. Timmons was honored by Dr. Muraszko for the manner in which she has inspired young physicians to provide compassionate care to surgical patients. ✧

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The American College of Surgeons (ACS) is accepting nominations for the 11th Joan L. and Julius H. Jacobson II Promising Investigator Award (JPIA), to be conferred in 2015. To be considered for the award, submissions must be dated no later than February 27, 2015.

This award recognizes outstanding surgeons who are engaged in research and advancing the art and science of surgery and who demonstrate early promise of significant contribution to the practice of surgery and the safety of surgical patients. A generous endowment established by the donors funds the award, which is administered by the ACS Surgical Research Committee.

**Award criteria**

- Candidate must be a Fellow or an Associate Fellow of the ACS.
- Candidate must be board-certified in a surgical specialty and must have completed surgical training in the last six years.
- Candidate must hold a junior faculty appointment at a research-based academic medical center; a candidate holding a military service position is also eligible.
- Only one application per surgical department will be accepted.
- Candidate must have received peer-reviewed funding such as a K-series award from the National Institutes of Health (NIH), Veterans Administration, National Science Foundation, or U.S. Department of Defense merit review to support their research effort.
- Nominees must submit a one-page essay to the committee explaining why they should be considered for the award and describing the importance of their past and present research.
- Nomination documentation must include an NIH-formatted biographical sketch and copies of the candidate’s three most significant publications.
- Nomination documentation must include a letter of recommendation from the nominee’s department chair. Up to three additional letters of recommendation will be accepted.

Surgeons who are at the “tipping point” of their research careers with a track record indicative of early promise and potential (such as a degree program in research or K-series award) will receive special consideration. Surgeon-scientists who are well established (for example, recipients of NIH research project grants) are not eligible.

**Nomination procedures**

Visit the JPIA website at https://www.facs.org/quality-programs/about/cqi/jacobson for instruction on submitting documentation and nomination materials.

For additional information, contact Carla Manosalvas at jacobsonpia@facs.org.
The Board of Governors of the American College of Surgeons (ACS) is accepting applications for the 2015 Nizar N. Oweida, MD, FACS, Scholarship. Applications are due December 15, 2014.

The Oweida Scholarship provides an award of $5,000 to subsidize the attendance and participation of a Fellow or Associate Fellow serving a small community at the ACS Clinical Congress 2015, October 4–8, in Chicago, IL. The scholar also will attend the annual meeting of the Scholarships Committee and the Rural Surgeons Forum to meet colleagues and receive the monetary award.

The $5,000 award may be used to defray travel expenses for the Clinical Congress, including Postgraduate Course fees, hotel costs, and per diem expenses. Preferential housing in a hotel near the site of Clinical Congress will be made available to the scholar. The scholar is responsible for making his or her own travel arrangements.

**Basic requirements**
Oweida Scholarship applicants must meet the following requirements:

- Serves a small town or rural community in the U.S. or Canada
- Is an ACS Fellow or Associate Fellow in good standing
- Is under 55 years of age on the date the application is filed

**Activities**
The Executive Committee of the Board of Governors will select the scholar after review and evaluation of the applications. Applicants for the Oweida Scholarship should submit a single PDF consisting of the following items in this order:

- A one-page essay discussing the following specific items:
  - Why the applicant wishes to receive the Oweida Scholarship
  - Why the applicant is qualified to receive the scholarship
  - Why the applicant’s practice is characterized as serving a small community
- A copy of the applicant’s current curriculum vitae

A scholar and an alternate will be selected, and all applicants will be notified of the outcome of the selection process by March 31, 2015.

The Oweida Scholar must attend the full week of the Clinical Congress in the year for which it is designated; the award cannot be postponed. The Oweida Scholar will provide a brief report of the Clinical Congress experience for possible publication in the *Bulletin of the American College of Surgeons*. A simple accounting for the award is also required. These items are due by December 1, 2015.

Send applications for this scholarship to kearly@facs.org, or mail to: Scholarship Section, American College of Surgeons, 633 N. Saint Clair St., Chicago, IL 60611-3211.

Questions may be directed to the ACS Scholarships Administrator at 312-202-5281.
New award available for hand surgery research

The American Foundation for Surgery of the Hand (AFSH), in partnership with the American College of Surgeons (ACS), is offering a shared Research Career Development Award to support mentored development and research training. This award will recognize a hand surgeon who has demonstrated a commitment to a career in research and has been awarded a K08 or K23 award from the National Institutes of Health (NIH) for funding to begin on or after January 1, 2014. Applications must be received by February 15, 2015.

The total amount of the award is up to $80,000 per year for a maximum of five years, subject to annual review. This award is meant to supplement the amount awarded by the NIH and is not intended to cover indirect costs or institutional overhead.

The award recipient is required to provide written progress reports summarizing his or her efforts at the end of each 12-month period on the anniversary date of the start of the funding.

To qualify for the award, applicants must meet the following requirements:

- Be a Fellow or Associate Fellow of the ACS and candidate or active member in the American Society for Surgery of the Hand
- Demonstrate commitment to a career in research
- Have been awarded a K08 or K23 award by the NIH for funding that began no earlier than January 1, 2014; award is subject to the policies and requirements of the NIH K08/K23
- Agree to provide a narrative report review at the conclusion of each year of funding

Applications must be submitted online at https://www.assh.wufoo.com/forms/afsh-acs-joint-research-career-development-award/

Full program requirements are posted on the AFSH website, at http://www.assh.org/Member-Resources/Grants-and-Awards. Contact the research division of the AFSH at afsh@assh.org or 312-880-1900 with questions.

SCHOLARSHIPS

AMERICAN COLLEGE OF SURGEONS | DIVISION OF EDUCATION

Blended Surgical Education and Training for Life

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

The program is free to members and contains:

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

To order, visit www.SurgicalPatientEducation.facs.org.

This Surgical Patient Education Program is a collaborative by the American College of Surgeons with the Society of Thoracic Surgery, the American Association for Thoracic Surgery, the Association of periOperative Registered Nurses, and the Commission on Cancer.

THIS PROGRAM IS FUNDED IN PART BY A GRANT FROM ETHICON ENDO-SURGERY.
Apply by February 2 for 2015 health policy management scholarships

The American College of Surgeons (ACS) is offering scholarships to subsidize attendance and participation in the Executive Leadership Program in Health Policy and Management at the Heller School for Social Policy and Management at Brandeis University, Waltham, MA. The $8,000 award for the 2015 course, May 31–June 6, may be used toward the cost of tuition, travel, housing, and subsistence during the period of the course and the post-course follow-up period.

The closing date for receipt of all application materials is February 2, 2015. All applicants will be notified of the outcome of the selection process by March 31, 2015.

The College is fully funding two of the scholarships, both reserved for general surgeons. Also, a number of surgical specialty societies are partnering with the ACS to cosponsor a scholarship for a member in good standing of both the College and their society. Participating societies include the American Association of Neurological Surgeons, the American Academy of Otolaryngology-Head & Neck Surgery, the American Association for the Surgery of Trauma, the American Pediatric Surgical Society, the American Society of Breast Surgeons, the American Society of Colon and Rectal Surgeons, the American Society of Plastic Surgeons, the American Surgical Association, the American Urogynecologic Society, the American Urological Society (via its Gallagher Scholarship program), the Eastern Association for the Surgery of Trauma Foundation, New England Surgical Society, the Society for Surgery of the Alimentary Tract, the Society of Thoracic Surgeons, and the Society for Vascular Surgery.

Questions may be directed to the ACS Scholarships Administrator at kearly@facs.org or by calling 312-202-5281. Requirements for these scholarships are on the ACS website at https://www.facs.org/member-services/scholarships/health-policy. For more information on the executive leadership program, go to http://heller.brandeis.edu/executive-education/index.html.

Call for Submissions

The American College of Surgeons Division of Education welcomes submissions to the following programs to be considered for presentation at Clinical Congress 2015, October 4–8, in Chicago, IL.

Oral Presentations
• SCIENTIFIC FORUM*
  (15 Excellence in Research Awards were given in 2014)
• SCIENTIFIC PAPERS*

Poster Presentations
• SCIENTIFIC POSTER PRESENTATIONS
  Ten posters are selected annually for the Posters of Exceptional Merit program

Video Presentations
• VIDEO-BASED EDUCATION

Submission Information
• Abstracts are to be submitted online only.
• Submission period begins after December 1, 2014.
• Deadline: 5:00 pm (CST), March 2, 2015.
• Late submissions are not permitted. There are no considerations made for “late-breaking abstracts.”
• Abstract specifications and requirements for each individual program will be posted on the ACS website at http://abstracts.facs.org/. Review the information carefully prior to submission.

*Accepted authors are encouraged to submit full manuscripts to JACS.
This report documents my experience as the 2014 American College of Surgeons (ACS) Traveling Fellow to Germany. First, I offer my utmost appreciation to the ACS, the German Surgical Society (GSS), and to Pon Satitpunwaycha, MD, FACS, who assisted in funding the fellowship. I attended the 131st Congress of the GSS in Berlin and six medical centers throughout Germany. I extend my sincere gratitude to my hosts Profs. Norbert Senninger, MD, PhD, FACS, and Tobias Keck, MD, FACS, who were instrumental in planning my trip.

The primary focus of my fellowship was to gain a broader understanding of surgical training and education in Germany, a deeper knowledge of its national health care system, and to observe multidisciplinary cancer care and clinical trial infrastructure.

My journey started at the 2013 Clinical Congress in Washington, DC. I met Professor Senninger, ACS Governor for Germany, at the International Reception and met members of the GSS at the annual dinner of the German-American reunion. After this dinner, I knew that my fellowship, which I was able to experience with my wife, Daria, would be a life-changing experience, as everyone I met was extremely kind and willing to assist me in any way possible.

**Hamburg: Asklepios Klinik Altona**

We flew into Frankfurt and took another flight to Hamburg, which is a beautiful mix of old and new and is the second-largest city in Germany. Prior to my arrival, I had been in contact with Prof. Wolfgang Schwenk, MD, FACS, at the Asklepios Klinik Altona, which is an 800-bed tertiary hospital that is nationally certified to treat pancreatic and colon cancer. Professor Schwenk provided me with his perspective on the German national health care system. As the department chief, he is required to operate on all privately insured patients, a small subset of the general population. We also discussed medical education and surgical training in Germany, particularly the differences in training residents and junior attendings.

I was then taken on intensive care unit (ICU) rounds, during which I met Professor Schwenk’s
The primary focus of my fellowship was to gain a broader understanding of surgical training and education in Germany, a deeper knowledge of its national health care system, and to observe multidisciplinary cancer care and clinical trial infrastructure.

Four senior attendings, all of whom are general visceral surgeons. Interestingly, trauma is a separate training path in Germany, although general surgeons are called upon if an operation is warranted.

I also found it interesting that dermatologists provide most care to melanoma patients and perform sentinel node biopsies. Meanwhile, sarcomas are generally referred to tertiary specialty centers.

At every hospital I visited, the day starts at 6:45 am with team ICU rounds, followed by a meeting to review overnight cases and consults. Each afternoon includes radiology rounds and each evening includes ICU rounds; the tumor board convenes multiple times a week.

I toured Klinik Altona with Dr. med. Curosh Taylessani. Although it is one of the largest emergency departments (EDs) in Hamburg, it was very quiet and not as busy as the EDs in the U.S. Despite fast-track protocols, it was interesting to see that patients generally remain in the hospital longer than patients in the U.S. Traditionally, German patients expect to stay in the hospital until they feel better, and, as a result, the number of rehabilitation centers is limited.

At that point, I met again with Professor Schwenk in the operating room (OR). The 12 ORs had sliding air-locking doors with anterooms. This hospital also had a new hybrid vascular and an integrated laparoscopic OR in Klinik Altona, making it one of the most modern ORs I have seen. I scrubbed for his first case—a female with sigmoid colon cancer invading the ureter. Most of the procedure was performed laparoscopically. It is interesting to note that a few German medical centers have a robotic system; however, because of their cost, surgical robots are used infrequently.

That evening, Professor Schwenk took Daria and me out for an enjoyable dinner on the harbor near the Fischmarket. Professor Schwenk was sincere and welcoming to us, and we will continue to keep in contact with him.
an interesting discussion about professional advancement in the German medical system.

Dr. Keck performs transplants, esophagectomies, and a large volume of hepato-pancreato-biliary surgeries (HPB). He is very interested in laparoscopic surgery and is one of the few surgeons who perform laparoscopic pancreaticoduodenectomies in Germany. Professor Keck also is building a remarkable academic department of surgery with a strong emphasis on translational research focused on pancreatic surgery. We spoke about the barriers to performing clinical trials in Germany, although Professor Keck is the principal investigator on multiple national pancreas clinical trials.

The next morning I arrived at Klinik Fur Chirurgie, a 1,000-bed hospital. I was taken on ICU rounds and then to their morning report. In the OR, I observed a laparoscopic sigmoid colectomy with Dr. med Claudia Benecke, who has extensive experience with transanal minimally invasive surgery for early rectal cancers. We discussed the treatment of rectal cancer in Germany, which is very similar to our approach in the U.S., for the most part, although for many upper rectal cancers, German physicians forgo radiation, and a fair number of patients do not receive adjuvant chemotherapy after rectal cancer operations. Next, I observed a pancreaticoduodenectomy with Dr. Bausch.

Later that day, I again met with Professor Keck, who gave me a tour of the private ward. On the tour, I learned that hospital leaders are planning to build a new three-dimensional-integrated OR. We then met with Prof. Dr. med Jens Habermann and Dr. med and PD Dr. Tilman Laubert in their translational research lab, which is situated opposite the clinic space to foster true bench-to-bedside research and collaboration. Professors Habermann and Laubert are very interested in cancer epigenetics and proteomics and are working on a computer chip for early detection of colon cancer. They also have established a system of tissue banking for their biosample repository. Next, we saw one of their patients in the endoscopy suite with Prof. Dr. Martin Kraus, a surgeon gastroenterologist. They treated an esophageal “anastomotic insufficiency” with a vacuum-assisted endosponge—a novel approach to this situation.

Berlin: GSS meeting
We left Lübeck and took the train to Berlin for the GSS national meeting. I attended an interesting session at the 131st Congress of the GSS, which was titled GSS and ACS: A Living Relation for the Future? At another session, I gave a presentation titled The Bilateral Scholarship Programs: Experience of an ACS Scholar, which was followed by a roundtable discussion including Professors Heuer, Keck, Senninger, and Zyromski; Ernst Klar, MD, FACS; Prof. med and GSS president Joachim Jahne, MBA; and myself about future prospects for building relationships between our two organizations and the
benefits of formalized exchange programs. I also gave a lecture during the Essentials of Surgery session titled Changing the Treatment Paradigm for Locally Advanced Rectal Cancer.

A session addressing problems with health care in Germany and other European countries included a lecture on surgical training in Europe. The discussion centered on resident duty hours and training; their maximum hours are 48 hours per week, in contrast to our 80 hours.

As part of the congress, the GSS offered a guided tour of the Wannsee Conference memorial exhibit. This experience was both emotional and educational, centering on the historic meeting of senior members of Nazi Germany, which was held to discuss the implementation of the Final Solution. I also attended a working session on international cooperation of the GSS with other surgical societies and met visiting professors from Austria, England, Israel, Poland, and Japan. President Jahne and secretary general Hans-Joachim Meyer, MD, FACS, moderated the discussion.

Berlin: Charité Campus Benjamin Franklin

The next day, I took the subway to the Benjamin Franklin campus of Charité hospital—a certified center for colorectal cancer with approximately 1,500 beds. Dr. med Mario Müller, who trained in Toronto, ON, in a surgical oncology fellowship, greeted me. I was then introduced to Prof. Dr. med Martin Kreis, director of surgery. We attended rounds, and I toured the facilities before visiting the OR. Professor Kreis had a young male patient with recurrent rectal cancer, which turned out to be a very interesting and difficult case requiring anterior dissection and a partial sacrectomy.

I had a lengthy conversation with the surgeons concerning resident duty hours, quality of residents in smaller hospitals, reimbursements, and nurse-to-patient ratios. Both Dr. Müller and I trained in a surgical oncology fellowship. Moreover, he provided me with unique insights into the similarities and difference between the American and German training model.

Heidelberg: Kliniken und Institute des Universitätsklinikums

After sightseeing in Munich, we arrived in Heidelberg in the afternoon, and then I was off to visit the Kliniken und Institute des Universitätsklinikums. Heidelberg is one of the largest tertiary referral centers for HPB surgery in Germany. Surgeons there perform approximately 700 pancreas resections, 100
I had a lengthy conversation with the surgeons concerning resident duty hours, quality of residents in smaller hospitals, reimbursements, and nurse-to-patient ratios.
Münster: Universitätsklinikum Münster
We took a train ride along the Rhine river to Münster, a beautiful town with a church on every corner and bikes everywhere.

I met Prof. Dr. med Emile Rijcken, and we toured the facility, followed by morning rounds. The first case I saw was a laparoscopic rectopexy, and the second case was total proctocolectomy. That evening, we met Dr. Rijcken and Dr. med. Thorsten Vowinkel for dinner. We discussed training, clinical practices, and areas of research.

The next morning, I met with Professors Senninger and Rijcken, and I presented my research projects to the faculty and trainees during morning rounds. I scrubbed in for a pancreaticoduodenectomy with Dr. med. Heiner Wolters. After the case, I toured the clinic, which has basic science lab space where residents have dedicated time for research. The clinic has its own endoscopy suite, and most of the surgeons perform upper and lower endoscopies. They are developing a virtual laparoscopic trainer for the residents and plan on performing analytic research studies with this tool.

Across the street from the clinic is a new skills lab for medical students and trainees. The main central clinic is composed of two 10-story circular towers, housing approximately 1,450 beds. The clinic includes the Comprehensive Cancer Center, with multidisciplinary tumor boards and an extensive radiation oncology department. We ventured to the top floor of one of the towers, which houses the ICU, to view the beautiful skyline of Münster.

On the final evening of our trip, we had a lovely dinner with Professor Senninger and his wife Christina. We spoke about his research years in Houston, TX, our families, and his involvement with international surgery over the years. Professor Senninger is a true gentleman and has built a world-class department of surgery. I know this experience will lead to continued collaboration and exchange.

I extend my thanks to the ACS and its International Relations Committee for this once-in-a-lifetime experience. I am extremely grateful to Professors Senninger and Keck, the GSS, and my hosts in Hamburg, Lübeck, Berlin, Heidelberg, Mannheim, and Münster. My thanks as well to my chairman at Fox Chase Cancer Center, Robert Uzzo, MD, FACS; my division chief, Elin Sigurdson, MD, PhD, FACS; and one of my mentors, John M. Daly, MD, FACS, for supporting my pursuit of this traveling fellowship.

This was a tremendous experience that I will cherish for my entire career. Building international relationships is paramount for advancing surgery. I learned that surgeons all speak the same language, despite subtle differences in techniques and culture. I wholeheartedly encourage my colleagues to participate in international fellowships, and I look forward to hosting and building international relationships and collaborations in the future.
The American College of Surgeons (ACS) proudly announces the new Evidence-Based Decisions in Surgery online modules. Derived from practice guidelines to help address diagnoses and conditions most relevant to general surgeons, these “point-of-care” modules were developed through a rigorous, peer-reviewed process.

The modules are:

- Meant to be used in patient-focused interactions and patient education
- Electronically available on any mobile device, tablet, or computer
- Available to all ACS members

For more information, visit www.facs.org/education/ebds or contact Sapna Dalal at sdalal@facs.org or 312-202-5568.
Calendar of events

NOVEMBER

San Diego Chapter
November 11
San Diego, CA
Contact: Jim Cox,
elcajonjim@cox.net,
www.sdcacs.org/

Wisconsin Surgical Society—
A Chapter of the ACS
November 14–15
Kohler, WI
Contact: Terry Estness,
wisurgical@att.net,
www.wisurgicalsociety.com/

Arizona Chapter
November 15–16
Tucson, AZ
Contact: Joni Bowers,
jonib@azmed.org,
www.azacs.org

Colorado Chapter
November 17
Denver, CO
Contact: Carol Goddard,
carol@goddardassociates.com,
www.coloradoacs.org

South Korea Chapter
November 27–29
Seoul, South Korea
Contact: Sun-Whee Kim,
sunkim@snu.ac.kr

DECEMBER

Brooklyn-Long Island Chapter
December 3
Uniondale, NY
Contact: Teresa Barzyz,
acsteresa@aol.com,
www.bliacs.org

China-Hong Kong Chapter
December 5
Hong Kong, China
Contact: John Wong,
jwong306@gmail.com

Massachusetts Chapter
December 6
Worcester, MA
Contact: Elizabeth Chouinard,
echouinard@prri.com,
www.mcacs.org

New Jersey Chapter
December 6
Iselin, NJ
Contact: Andrea Donelan,
njsurgeons@aol.com,
www.nj-acs.org

JANUARY 2015

Southern California Chapter
January 16–18
Santa Barbara, CA
Contact: James Dowden,
jdowden@prodigy.net,
www.socalsurgeons.com

Louisiana Chapter
January 17–18
New Orleans, LA
Contact: Janna Pecquet,
janna@laacs.org,
www.laacs.org

Montana and Wyoming
& Idaho Chapters
January 23–25
Big Sky, MT
Contact: Cyan R. Sportsman,
csportsman@msurgical.com

South Florida Chapter
January 26
Fort Lauderdale, FL
Contact: Bill Bouck,
bill@bouckmgmt.com,
www.sfc-acs.org

Iran Chapter
January 28–30
Kish Island, Iran
Contact: H. Kalbasi,
h_kalbasi@yahoo.com

Patient-Reported
Outcomes in Surgery
January 29–30
ACS 20 F Street Conference
Center, Washington, DC
Contact: Katie Sommers,
ksommers@plasticsurgery.org,
www.thespf.org

FUTURE CLINICAL
CONGRESSES

2015
October 4–8
Chicago, IL

2016
October 16–20
Washington, DC

2017
October 22–26
San Diego, CA

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

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www.facs.org/events or http://web2.facs.org/ChapterMeetings.cfm

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