Training in OR crisis management
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Author bios

**DR. ARMSTRONG** (a) is Surgeon General and Secretary, Florida Department of Health, Tallahassee, FL. He serves on the American College of Surgeons (ACS) Board of Governors and the ACS Health Policy and Advocacy Group.

**DR. CARON** (b) is assistant professor, University of British Columbia, department of surgery and Northern Medical Program, Prince George, BC; associate member, University of British Columbia, School of Population and Public Health, Vancouver; adjunct faculty, University of Northern British Columbia, Prince George; and associate faculty, Johns Hopkins University Bloomberg School of Public Health, Baltimore, MD.

**DR. DAGI** (c) is Distinguished Scholar and Professor, The School of Medicine, Dentistry and Biomedical Sciences, Queen’s University Belfast, Northern Ireland; lecturer, department of global health and social medicine, Harvard Medical School, Boston, MA; and member, Council on Surgical and Perioperative Safety (CSPS) Board of Directors. He is Chair of the ACS Committee on Perioperative Care.

**DR. DAVIDSON** (c) is professor of surgery, department of surgery, University of Texas Southwestern, Dallas, TX.

**DR. FANTUS** (c) is director, trauma services, and chief, section of surgical critical care, Advocate Illinois Masonic Medical Center, and clinical professor of surgery, University of Illinois College of Medicine, Chicago. He is Past-Chair of the ad hoc Trauma Registry Advisory Committee of the ACS Committee on Trauma.

**MS. Glickson** (f) is Communications Associate, ACS Division of Integrated Communications, Chicago, IL.

**MS. GRILL** (g) is State Affairs Associate, ACS Division of Advocacy and Health Policy, Chicago.

**DR. HEALY** (h) is Emeritus Gerald B. Healy Chair in Otolaryngology, Children’s Hospital, Boston; professor of otology and laryngology, Harvard Medical School; and member, CSPS Board of Directors. He is ACS Past-President and Past-Chair of the Board of Regents.

**MR. HEDSTROM** (i) is Deputy Director, Legislative Policy and Political Affairs, ACS Division of Advocacy and Health Policy, Washington, DC.

*continued on next page*
Author bios continued

**MS. JACKSON** (j) is Practice Affairs Associate, ACS Division of Advocacy and Health Policy, Washington, DC.

**MS. KENNEDY** (k) is a research assistant, University of Northern British Columbia Northern Medical Program.

**DR. KLINGENSMITH** (l) is chair, Surgical Council on Resident Education and Mary Culver Distinguished Professor of Surgery and vice-chair for education, Washington University, St. Louis, MO.

**DR. LAPORTA** (m) is a retired U.S. Army Colonel and professor of surgery, Rocky Vista University School of Medicine, Parker, CO.

**DR. LIPSHY** (n) is a chief surgery consultant for the U.S. Department of Veterans Affairs Health Care System and residency educational director, East Virginia Medical Center–Hampton Veterans Affairs Medical Center, Hampton, VA.

**DR. MABRY** (o) is associate professor of surgery at the University of Arkansas for Medical Sciences, Little Rock. He is Chair of the ACS Health Policy Advocacy Council, a member of the ACS General Surgery Coding and Reimbursement Committee, and is alternate ACS advisor to the American Medical Association (AMA) Specialty Society Relative Value Scale Update Committee.

**DR. MALANGONI** (p) is an ACS Regent and associate executive director, American Board of Surgery, Philadelphia, PA.

**DR. MARSHALL** (q) is senior vice-president for cancer prevention and population sciences and chair, department of cancer prevention and population sciences, Roswell Park Cancer Institute, Buffalo, NY.

**DR. NELSON** (r) is Fred C. Andersen Professor of Surgery and chair, division of surgery research, Mayo Clinic, Rochester, MN, and Program Director of the Alliance/ACS Clinical Research Program.

*continued on next page*
Author bios continued

**DR. PARSONS** (s) is associate professor of surgery, department of urology, Moores Cancer Center, University of California-San Diego.

**DR. SAVARISE** (t) is assistant clinical professor of surgery at the University of Utah, Salt Lake City. He serves on the ACS General Surgery Coding and Reimbursement Committee and the Advisory Councils for General Surgery and Rural Surgery and is the ACS alternate advisor at the AMA Current Procedural Terminology Editorial Panel.

**DR. SCHROEN** (u) is associate professor of surgery, division of surgical oncology, University of Virginia, Charlottesville.

**DR. SLAKEY** (v) is professor and Robert and Viola Lobrano Chair of Surgery, department of surgery, Tulane University School of Medicine, New Orleans, LA.

**MR. SUTTON** (w) is Manager of State Affairs, ACS Division of Advocacy and Health Policy, Chicago.

**MS. TIEBERG** (x) is Manager of Chapter Services, ACS Division of Member Services, Chicago.

**DR. WARNOCK** (y) is Woodward Professor of Surgery, University of British Columbia, department of surgery, Vancouver.
surgeons work in a physically demanding field, and the risk of injury is considerable. Moreover, most physicians and surgeons in the U.S. are now 50 years of age or older, and like all aging Americans, need to be prepared for the likelihood that they will develop a debilitating or chronic condition that will prohibit them from remaining in practice. Furthermore, surgeons are facing heightened stress with each passing day due to reimbursement, liability, and workforce shortage issues. For some surgeons, the pressures can be extraordinary, leading to burnout, substance abuse, and other mental and physical health care problems.

Most of us have little time or inclination to contemplate these possibilities and to plan for a future in which we are unable to experience the financial and personal rewards of surgical practice. In fact, more than half of 2,365 physicians who responded to a survey conducted by a subsidiary of the American Medical Association admit they are behind in preparing for retirement and their financial future. Many reported gaps in their knowledge of personal finances and expressed a lack of confidence in their financial decisions related to retirement savings, estate planning, and insurance.*

As a professional organization, the American College of Surgeons (ACS) offers its members a range of services designed to help them plan for the years leading up to and beyond retirement, so that they can continue to enjoy the benefits of their many years of dedication to patient care. With the majority of surgeons looking toward retirement in as little as 10 years, protection of future income takes on significant importance. One form of protection that is particularly relevant to an aging population of surgeons is disability insurance.

Need for disability insurance
A disability is defined as any illness or injury that interferes with an individual’s ability to work. Among those individuals who experience a disability, one in

An estimated 81 percent of all physicians have private disability insurance; however, few of them have coverage that is sufficient to protect their income and allow them and their families to enjoy their current lifestyle.

Three is out of work for three months or more, one in five is unable to work for a year or longer, and one in seven cannot work for five years or more.1 When surgeons lose their ability to practice for extended periods of time, they are vulnerable to losing everything they have worked so hard to acquire.

According to the Council for Disability Awareness, nearly three in 10 new long-term disability claims in 2012 were caused by musculoskeletal system and connective tissue disorders, such as rheumatoid arthritis; the next leading cause was cancer or neoplasms.1 As we all know, if a surgeon were to develop severe arthritis or end-stage cancer, his or her ability to operate would be significantly limited for at least some period of time, if not draw to an end.

Although certain safety nets are in place to assist individuals who are injured, such as Workers’ Compensation and Social Security, these programs offer little protection for most Americans, especially those of us in professional positions. Most disabilities are not directly work-related and, therefore, not covered by Workers’ Compensation. Meanwhile, to qualify for Social Security disability, an individual must be completely unable to work for at least a year or have a terminal, irreversible illness.

Consider your options
It is important that surgeons take the time to review their current disability benefit amounts. I would encourage members of the ACS to research the possibilities available to them through this organization and their personal financial consultants to obtain a higher income replacement amount and higher disability benefits.

As unpleasant as it is to contemplate, we all need to accept the realities of being part of a demanding profession and of the inevitable effects of the aging process. Take the necessary steps to protect your family and to maintain the lifestyle you have earned and enjoy. For more information about ACS-sponsored disability programs, contact our administrator, NEBCO, at 1-800-433-1672.

Surgeons may be underinsured
An estimated 81 percent of all physicians have private disability insurance; however, few of them have coverage that is sufficient to protect their income and allow them and their families to enjoy their current lifestyle. For example, if a surgeon earns $600,000 and has a maximum monthly benefit of $20,000, his or her family’s income will drop to 40 percent of its existing level.

According to the 2013 study of U.S. physicians’ financial preparedness cited earlier, 42 percent of the respondents had not reviewed their disability insurance policy either in the last five years or since they purchased it. Furthermore, most of them were uncertain whether they were carrying the right amount of protection for their needs, and another 50 percent said they were unsure if the disability benefit they would receive was considered taxable income.

In researching and obtaining disability insurance, surgeons should seek out opportunities within the traditional disability insurance markets as well nontraditional long-term disability insurance plans. The nontraditional marketplace offers coverage with higher limits on benefits as well as novel policy features and liberal underwriting with specialty occupation definitions. As a result, surgeons may experience an income replacement ratio of up to 65 percent of their current income.

If you have comments or suggestions about this or other issues, please send them to Dr. Hoyt at lookingforward@facs.org.

Established in 2004, the Surgical Council on Resident Education (SCORE) is a consortium of seven U.S.-based surgical organizations: the American Board of Surgery (ABS), American College of Surgeons (ACS), American Surgical Association (ASA), Association of Program Directors in Surgery (APDS), Association for Surgical Education (ASE), Accreditation Council for Graduate Medical Education (ACGME), and the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES). In an effort led by the ABS, six founding members of the group initially met in November of that year (with SAGES joining later) and agreed to work toward two goals:

1. Develop a standardized, competency-based curriculum for general surgery residency training that addresses the six competency areas as defined by the Accreditation Council for Graduate Medical Education (ACGME).

2. Develop a Web portal to deliver this content to general surgery residents in training. The first official meeting of the entire group convened in November 2006. Richard Bell, MD, FACS, who was hired by the ABS to oversee the initial development of the curriculum and Web portal, chaired this conference.¹

Over the next two years, an initial curriculum outline was developed covering the competency of patient care and operative skills. This curriculum was developed through an iterative process that involved SCORE council representatives and program directors in surgery. The operative case experience of surgery residents was examined and classified by program directors in surgery, and input was obtained from other stakeholders.² This curriculum outline was the basis for development of the early content that was delivered on the SCORE Web portal, which was piloted to 33 selected residency programs in 2008.³ This curriculum outline has since been expanded to include the competencies of medical knowledge, systems-based practice, professionalism, and interpersonal skills and communication. The curriculum outline is dynamic and is reviewed and updated annually according to recommendations made by various stakeholder groups, as coordinated by the ABS. It is publicly available on the SCORE Web portal (http://www.surgicalcore.org/public/curriculum), as well as in a print version.
In 2009, the Web portal was made available to all residency programs free of charge. In the 2010-2011 academic year, the portal became a subscription-only resource, and by 2012, 96 percent of general surgery residency programs subscribed to the SCORE Web portal to support education.

**SCORE Web portal**

In 2009, the Web portal was made available to all residency programs free of charge. In the 2010–2011 academic year, the portal became a subscription-only resource, and by 2012, 96 percent of general surgery residency programs subscribed to the SCORE Web portal to support education. Participation in the Web portal has expanded to include surgery residencies in Canada and other nations throughout the world, as well as more than half of all osteopathic surgery training programs.

The patient care competency is organized in 28 categories and presented in individual content areas, termed “modules.” These modules are divided into two overarching areas: diseases/conditions and operations/procedures. Each area is subdivided according to the level of proficiency a residency graduate is expected to possess. These designations serve to focus the learning experience during training. For diseases/conditions, modules are defined as either “broad” or “focused.” A graduate should be able to provide comprehensive management for all aspects of diseases classified as broad. For focused diseases, a graduate should be able to make a diagnosis and provide initial management and stabilization but should not be expected to provide comprehensive care. Operations/procedures topics are classified into one of three areas: essential-common, essential-uncommon, and complex.

Essential-common operations are defined as “frequently performed operations in general surgery; specific procedure competence is required by the end of training.” Essential-uncommon operations are “uncommon, often urgent operations seen in general surgical practice but not typically done in significant numbers by residents; specific procedure competency required by end of training (but may not be obtained by case volume alone).” Complex operations are “not consistently performed by general surgeons in training or not typically performed in general surgery practice.” It is expected that residents will obtain generic experience in complex procedures but not competence in individual procedures and that some residency programs may provide sufficient experience for competency by their graduates. These classifications are reviewed annually to determine their continuing relevance to a given category. We anticipate that the curriculum will be dynamic and that some topics will change over time as technology and disease management evolve.

**Organizational structure and outreach**

SCORE, as a consortium, curriculum, and Web portal, has a defined and complementary organizational structure (see boxed item, page 12). The daily operation of the Web portal is overseen by a leadership group, which is also responsible for implementing new features on the portal as well as overseeing overall direction and business operations of the portal and curriculum. The SCORE council (composed of representatives from each of the seven member organizations) helps set the strategy and meets at least once a year. An editorial board, composed of residency program directors and other surgical educators, oversees the development of all content for the Web portal, and works to ensure that all content is relevant, timely, and up-to-date. Lastly, a resident advisory group, populated with residents representing a variety of program types, locations, and sizes, advises on the delivery and type of content that best suits trainees’ learning needs and preferences. This combination of stakeholders, users, and education experts helps to ensure that the SCORE curriculum and Web portal remain relevant, useful, and engaging.

Representatives of SCORE have participated in a number of national presentations related to the SCORE curriculum and Web portal use, including a presentation describing the best methods to incorporate the many features of the portal into the defined curriculum that drives an individual program’s learning and teaching. This topic has been the subject of workshops during Surgical Education Week (the combined meetings of the APDS and ASE) for the past five years and has been part of panel discussions during the ACS Clinical Congress on several occasions. These efforts, combined with ...
SCORE ORGANIZATION

SCORE leadership team
Mary E. Klingensmith, MD, FACS
Chair, SCORE Council
Mary Culver Distinguished Professor of Surgery, vice-chair for education, Washington University, Saint Louis, MO

Mark J. Hickey
Chief operating officer
Kerry B. Barrett
Content management specialist

Mark A. Malangoni, MD, FACS
Associate executive director, American Board of Surgery

SCORE editorial board
Cameron Akbari, MD, FACS
Assistant professor of surgery, division of vascular surgery, Georgetown University School of Medicine Washington, DC

Michael Awad, MD, PhD, FACS
Program director, general surgery; director, surgical skills laboratory; assistant professor of surgery, Washington University St. Louis, MO

Mary E. Klingensmith, MD, FACS
Mary Culver Distinguished Professor of Surgery, Washington University St. Louis, MO

Monica E. Lopez, MD, FACS, FAAP
Assistant professor of surgery and pediatrics, Baylor College of Medicine Houston, TX

Douglas S. Smink, MD, MPH, FACS
Program director, general surgery residency; associate medical director, STRATUS Center for Medical Simulation, Brigham and Women’s Hospital; assistant professor of surgery, Harvard Medical School, Boston, MA

Eric G. Van Eaton, MD, FACS
Assistant medical director for surgical critical care; service director, surgical intensive care unit; assistant professor of surgery, Division of Harborview Trauma and Burns; Adjunct assistant professor of biomedical informatics and medical education, division of biomedical and health informatics, University of Washington Seattle, WA

Daniel Vargo, MD, FACS
Program director, general surgery residency; associate professor of surgery, University of Utah School of Medicine Salt Lake City, UT

Tina W.F. Yen, MD, MS, FACS
Associate professor of surgery, division of surgical oncology, Medical College of Wisconsin Milwaukee, WI

SCORE resident advisory group
Jenny Guido, MD
University of South Florida Tampa, FL

Grace Hsiung, MD
University of Texas-San Antonio San Antonio, TX

Ray King, MD
Georgia Health Sciences University Augusta, GA

Richard Miskimens, MD
University of New Mexico Santa Fe, NM

Danielle Pigneri, MD
Robert Packer Hospital/Guthrie Clinic Sayre, PA

Lin Riccio, MD
University of Virginia Charlottesville, VA

Anna Royer, MD
University of Tennessee-Chattanooga Chattanooga, TN
with frequent, free webinars, have helped program directors and residents better understand the content available on the SCORE Web portal and how to best use it to optimize resident teaching and learning.

**Status of the SCORE portal**

The content on the SCORE Web portal is categorized into several areas, including modules, textbooks, videos, self-assessment questions, and supplemental resources. This structure is intended to provide an integrated, comprehensive site for both program-directed and self-directed learning.

**Modules.** A module defines a specific disease/condition or operation/procedure in the curriculum outline. Each module is an originally authored subject that follows a specific outline, ensuring consistency in the learner experience. Within each module are defined learning objectives to focus the residents’ learning and mastery of the material, open-ended questions that residents may use to assess their knowledge of the material or that faculty may use to facilitate a didactic conference, links to chapters from the major surgical texts, and relevant videos.

Currently, approximately 650 modules on patient care, medical knowledge, and systems-based practice competency are posted on the SCORE portal, and approximately 150 additional modules are in production. Once these remaining modules are posted, which is expected to occur by the end of 2013, the current curriculum outline will be complete.

**Textbooks.** With the permission of their publishers, the Web portal features chapters from a number of major surgical textbooks to supplement the learning experience. Chapters are linked to specific learning modules. The list of available textbooks is shown in the box on this page. Most of the textbooks support the patient care and medical knowledge competency areas, but two recent additions, *Ethical Issues in Clinical Surgery* and *Surgical Palliative Care: A Resident’s Guide*, support professionalism and interpersonal and communication skills. Additional content is under development for these general competency areas.

**Videos.** As a digital interface for learning, the SCORE portal is ideal for incorporating multimedia instructional channels. The video library available on SCORE
Currently, approximately 650 modules on patient care, medical knowledge, and systems-based practice competency are posted on the SCORE portal, and approximately 150 additional modules are in production.

covers a broad range of topics, from minimally invasive operations, to operative exposures for trauma, to endoscopy. SAGES has contributed a number of excellent videos to SCORE, including the SAGES Top 21 Videos. The ACS has contributed videos from the Advanced Surgical Skills for Exposure in Trauma (ASSET) and Advanced Trauma Life Support® (ATLS®) courses, the University of Texas-Southwestern has contributed a number of trauma operative videos, and a number of individuals have provided important videos of other procedures to round out the catalog. SCORE continues to seek additional videos for use as adjuncts to instruction.

**Self-assessment questions.** A feature on the Web portal that has been popular with resident users is the self-assessment area, which features more than 2,000 multiple-choice questions, covering all of the content areas on the curriculum outline. These questions allow trainees to assess their knowledge and focus their learning, as each question is accompanied by a detailed explanation of the correct and incorrect answers. In the future, these questions will be linked directly to modules for an improved navigation experience.

**Supplemental resources**
The supplemental resources area of the Web portal comprises several important adjuncts to the learning experience. For example, StatDx is an online decision support system primarily intended for radiologists. This extensive resource provides a written overview of a vast range of topics with differential diagnoses as well as anatomic drawings and radiologic images, including plain films, ultrasound, and computed tomography scan and magnetic resonance imaging examples representing a broad spectrum of radiologic diagnoses and findings.

Educational tools include the ACS Surgery Weekly Curriculum, which is drawn from ACS Surgery: Principles & Practice and features a short, multiple-choice quiz on a selected topic each week that is indexed to the SCORE curriculum outline. Residents often use this additional resource for self-assessment of knowledge, whereas residency program directors use the weekly schedule of topics as a method for developing an annual outline for their own program-based didactic conference schedule.

The American Society of Transplant Surgeons Academic Universe is a collection of information that provides in-depth exposure to selected topics in solid organ transplantation. The Academic Universe is intended to support the resident learning experience during his or her transplant surgery rotations and for residents who are interested in learning more about these transplantations.

Journal Club (an evidence-based, critical appraisal of the literature) is an important part of the resident learning experience. This resource is supported on the SCORE portal via links to the ACS Evidence-Based Reviews in Surgery (EBRS) and the Annals of Surgery Journal Club. The EBRS comprises an extensive catalog of topics, divided by either research methodology or clinical category, that teaches critical appraisal skills in the context of current articles from the surgical literature. Methodological and clinical reviews of the articles are included for each topic and can easily be used to provide residents with the tools to learn important skills essential to lifelong learning. The Annals of Surgery Journal Club is an interactive resource for surgery residents and surgeons to discuss and critically evaluate articles published in the journal. A guest expert selects an article for discussion each month, summarizes it, and poses questions to the residents, who may respond using an interactive, online forum.

The Comprehensive Online Archived Care Heuristic (COACH) operated by the Columbia University Medical Center, New York, NY, is an online multimedia educational resource based on pretraining. It provides users with training videos, articles, and simulations that are intended for resident review prior to exposure to real-life situations. COACH delivers rich, multimedia content including operative videos, 3-D animations, lectures, illustrations, and text that are ideal for both in-depth study and just-in-time learning. Popular items in this extensive learning resource include “case cards” that residents may view for the
pragmatic aspects of preparing for an operative case, as well as extensively annotated 3-D animations of surgical anatomy.

**The future of SCORE**

The SCORE curriculum outline has become widely accepted as an essential resource for resident education. The ABS has started to use the curriculum outline to construct questions for its examinations and to set expectations for evaluation. The SCORE Web portal, in particular, has enjoyed early success for delivery of educational content. Perhaps as an acknowledgement of this accomplishment, educators in other specialty areas including anesthesia, orthopaedics, otolaryngology, and neurosurgery have all made inquiries regarding the feasibility of developing a similar system to support training in these fields. Pediatric surgery, vascular surgery, surgical oncology, and surgical critical care have all begun efforts to develop and deliver curricular content to support the learning of trainees in these fields using the existing Web platform. Through partnerships with other specialty boards and societies, SCORE is working to develop specific curricula for each of these disciplines.

The Web portal continues to evolve and improve with input from our organizational structure and from users. New features planned for the portal include improved navigation to self-assessment content, more robust reporting and tracking features, and expanded content to support all six of the competency areas.

Controlling financial costs remains a priority for the SCORE council. To date the ABS has invested several million dollars in the SCORE curriculum project and Web portal, with the ACS, ASA, and APDS also contributing to their development. SCORE was developed to help provide more equity in curricular resources available to support residency learning, and keeping subscription costs low has been a guiding principle. Training programs are charged a $500 enrollment fee in addition to $125 per resident per year. With significant stewardship of resources, it is anticipated that the SCORE Web portal will become self-sustaining within the next two years. The SCORE council will be performing a needs assessment to determine the feasibility of expanding subscriptions to the Web portal to other users.

The SCORE Web portal has been widely accepted in surgical training programs and has provided a resource that affords the vast majority of residents a rich, multimedia resource to support both their didactic learning as well as patient care activities. This collaborative effort of major surgical organizations, including the College, has resulted in a comprehensive and user-friendly Web portal that has become a valuable adjunct to resident learning and patient care.
In 2010, the American College of Surgeons (ACS) began a Chapter Lobby Day Grant Program that provides funding to chapters that intend to sponsor lobby days in their respective state capitals. Over the course of the last three years, many chapters have taken advantage of the grant program in an effort to energize and engage their leadership and members in grassroots advocacy. As of press time, 19 ACS chapters have participated in this program, including Alabama, Connecticut, Florida, Georgia, Illinois and Metro Chicago, Indiana, Kansas, Maine, Massachusetts, Michigan, North Carolina, New York and Brooklyn-Long Island, Northern California, Ohio, Oregon, Tennessee, and Virginia.

By sponsoring lobby days, chapters have laid the groundwork for advancing surgical issues and effecting health system reforms at the state level through meetings with their elected state officials. Chapter member visibility with state legislators helps to remind lawmakers that ACS chapters are the voice of surgery in their states, and it is anticipated that relationships forged today will result in legislative successes tomorrow.

Most chapters have wrapped up their lobby days for 2013, given that most state legislatures meet between January and June. This article provides a snapshot of several 2013 lobby day activities and accomplishments.

**Alabama**
The Alabama Chapter meeting took place February 5 in conjunction with a legislative reception sponsored by the Medical Association of the State of Alabama. Several members of the medical community attended the “State of the State Address” that Gov. Robert Bentley (R) delivered that day.

The Alabama surgeons who attended the event were able to meet with several legislators, including the chairs of many important committees. During these meetings they discussed funding for the state trauma system, workforce and professional liability issues, graduate surgical education, Medicaid funding, and scope of practice, among other topics. Those meetings spurred further discussion regarding how surgeons could offer expert input on future legislative efforts pertaining to health care.

**Florida**
The Florida Chapter and the Florida Chapter Committee on Trauma members met in Tallahassee, FL, February 19–20, for 2013 Legislative Day events. The activities began with participants and state representatives convening at a reception. The casual setting provided an informal opportunity for chapter leaders to introduce themselves to legislators before lobby day events at the state capital, which began with presentations from Chris Nuland, Florida Chapter lobbyist. Mr. Nuland discussed relevant state health care issues and provided talking points for participants to use when meeting with legislators on proposed bills. Jon Sutton, co-author of this article, provided an overview of resources that the College provides to chapters and of state legislation that the ACS is tracking across the country.
Following the presentations, participants met with their representatives and some health committee members during the final week of meetings before the general session began. Having the lobby day before the session provided an opportunity for the chapter to do some legwork on critical legislation, including a modest tort reform bill that the legislature passed, which limits expert witness testimony to those health care professionals in the defendant’s own specialty. A scope-of-practice bill also passed that allows optometrists to prescribe certain pharmaceuticals but prohibits them from performing surgery.

**Georgia**

The Georgia Society of the ACS hosted two new events during its lobby day program, March 20–21. First, a dinner for the chairs and physician and nurse members of the House and Senate Health Committees took place, followed the next morning by a legislative breakfast at the state capitol.

The dinner provided an opportunity for a core group of surgeons and legislators to engage in many productive conversations, and thereby fostered the development of personal relationships between ACS members and legislators. The Board of the Georgia Society of the ACS was so pleased with the event that they decided to host a dinner each night of next year’s lobby day events: one for the House and one for the Senate. Surgeons who attended the dinner appreciated the convenience of meeting with legislators in the evening so that it did not affect their regular work hours, and legislators said they appreciated the opportunity to focus on issues important to surgeons without the daily distractions that come with meeting at the capitol.

The breakfast at the capitol the following morning provided an opportunity for legislators and their staff to connect with Georgia surgeons. Especially memorable for some participants was the fact that the state House and Senate adopted resolutions declaring March 21 to be Georgia Surgeons’ Day.

**Indiana**

The Indiana Chapter held its third lobby day program February 4, earlier in the month than in previous years, offering surgeons the opportunity to address a broad array of legislation with lawmakers. Nearly 30 surgeons participated in the event, as well as a couple of speakers, including Indiana State Sen. Mike Delph (R), who gave an informal presentation on the legislative process. He stressed that surgeon attendance at the event was very important and truly a part of their civic duty.

Other speakers included Mr. Sutton, who addressed the resources and programs available to Fellows through the state affairs area of the ACS Division of Advocacy and Health Policy; and Mike Rinebold, director of governmental relations for the Indiana State Medical Association, who spoke about health care-related legislation that is expected to affect all physicians.

Two speakers provided updates on the Affordable Care Act: Seema Verma, a consultant who developed the Healthy Indiana Plan, provided an update on state health insurance exchanges, and Greg Kiray, MD, Indiana University Health Physicians Service-Line Chief for Primary Care, provided an update on the meaningful use provision of the law. Attendees received handouts with pertinent information on bills moving through the legislature. After a group discussion and brief lobby training, attendees met with legislators at the Capitol.

The measure of success was evident as two bills discussed in meetings were enacted. These laws pertain to scope of practice and end-of-life patient care.

**Kansas**

The Kansas Chapter collaborated with the Kansas Academy of Family Physicians to jointly sponsor a lobby day program on January 23. This collaboration allowed the chapter to capitalize on the leverage that the Kansas Academy of Family Physicians has built through the presentation of lobby day programs over a number of years and to provide speakers and legislators with a larger audience. Seven chapter leaders attended, including the Chapter President and President-Elect.
The first portion of the day was reserved for the chapter to meet with the executive director of the Kansas State Board of Healing Arts, which is responsible for approving state licensure for appropriately qualified health care professionals. A key issue discussed in this meeting was the development of a system that allows out-of-state health care practitioners to have their licenses recognized in Kansas during a declared state of emergency. The executive director of the board agreed to initiate conversations with the governor on this topic to ensure his continued support but cautioned that for the policy to receive consideration, it would have to include certain essential components, such as a governor-issued declaration identifying the nature and area of the disaster; a specific time when the disaster would be declared over; evidence of current licensure in their respective state; professional liability insurance coverage; and no disciplinary actions on record.

Following a lunch with presentations by the Kansas Medical Society and the Kansas Academy of Family Physicians, attendees went to the capitol to meet with their legislators and participated in committee hearings.

New York
The New York/Brooklyn-Long Island Chapters and the New York Coalition of Specialty Physicians presented their annual lobby day program on April 23. The day included visits with more than 100 legislative offices and began with a panel discussion on key pieces of legislation, such as nonphysician scope-of-practice expansion, out-of-network reform, and various tort reform bills that could dramatically increase liability insurance rates if enacted.

Ohio
More than 16 members of the Ohio Chapter and the Ohio Committee on Trauma attended a legislative dinner on February 28 with six state legislators who are experts on health and human services issues. Conversations over dinner ranged from pending legislation that would affect breast reconstruction mandates and the use of surgical technology, to the need to reform Ohio’s statewide trauma system. Both surgeons and legislators noted that the dinner was a success in that it provided a unique opportunity to exchange ideas on important issues affecting the health care system and the practice of medicine in Ohio.

Oregon
A total of 15 surgeons participated in the Oregon Chapter lobby day on March 11. Event speakers included Rep. Mitch Greenlick (D), chair of the House Healthcare Committee; Sean Kolmer, a policy advisor to Gov. John Kitzhaber, MD (D); and Bryan Boehringer, a lobbyist for the Oregon Medical Association.

Surgeons and their legislators discussed a number of important pieces of legislation and issues. One bill that gained a lot of attention centered on disclosure and offer as a means of tort reform. Although the bill did not fundamentally address the claims resolution process, it did address certain aspects of tort reform, such as apology and early disclosure, which could remedy some problems in the tort system.

Community Care Organizations (CCOs)—a network created by state policymakers to reduce health care expenditures—was another topic covered during the event. Lobby day attendees discussed how the CCOs would actually function versus how they are described in theory, including their potential impact on reimbursement rates—an issue on which hospitals and CCOs sometimes disagree and which may lead to legal disputes. The lobby day ended with members meeting with legislators at the state capitol and attending a Health Care Committee hearing.

More success anticipated
As this overview demonstrates, numerous successful models are available for chapters to use in planning and conducting lobby days. State chapters are encouraged to participate in the ACS Chapter Lobby Day Grant Program and develop strategic alliances to help advance important state legislation.

To learn more about the grant program, contact Jon Sutton, ACS State Affairs Manager, at jsutton@facs.org.
At press time, U.S. senators and representatives had left Washington, DC, for their annual summer recess without much to show for the first seven months of the 113th Congress. Locked in inter- and intra-party sniping, Congress had its least productive year since the World War II era. However, some significant issues were moving forward and were likely to be part of an enormous end-of-year legislative/fiscal package.

**Medicare payment**

In February, the Republican majority staffs of the U.S. House Energy and Commerce and the Ways and Means Committees jointly released an initial framework for repealing the Medicare sustainable growth rate (SGR) formula used to calculate physician payment and reforming the reimbursement system (see table, page 20).1,2

After months of back-and-forth discussions with the College and other stakeholders, on May 28, the Energy and Commerce Committee released its long-awaited legislative draft proposal to reform the Medicare physician payment system.3 The ACS submitted comments in response to the committee’s request for feedback, maintaining that any new payment system must be based on the complementary objectives of improving outcomes, quality, safety, and efficiency while reducing the growth in health care spending.4

On July 31, the Energy and Commerce Committee unanimously approved a bill crafted from the proposal. The Medicare Patient Access and Quality Improvement Act (MPAQIA) is bipartisan legislation that would permanently repeal the SGR and develop a new physician payment system based on health care professionals’ proven ability to provide high-quality care to patients.5,6 The introduction of this legislation represents the beginning of what will likely be a long process, as the House Ways and Means Committee—which has jurisdiction over revenue-related aspects of Medicare—at press time was expected to take up its own legislation in September, when Congress returns from its month-long recess.

On the Senate side, the Finance Committee issued a request for feedback on several questions regarding the Medicare physician payment system.7 In late May, the ACS responded, with a number of recommendations on how to reduce health care spending in the current...
### Trauma care

Several other priority issues for the College have gained traction, including many bills pertaining to trauma services. On May 15, Sen. Roy Blunt (R-MO) introduced S. 961, the first bill brought before the Senate that seeks to improve patient access to emergency care services by providing liability protection to those health care professionals working under the Emergency Medical Treatment and Active Labor Act (EMTALA). EMTALA mandates that a physician provide care to stabilize a patient who presents at a hospital emergency department. Surgeons in emergency settings provide complex, high-risk surgical care for severely injured patients, often late at night and at the expense of their elective surgery schedules the following day. Unfortunately, the high liability risk associated with providing such care is broadly acknowledged as a key factor contributing to the growing shortage of specialists participating in emergency on-call panels. Rep. Charlie Dent (R-PA) introduced the House version (H.R. 36) of this legislation in January.

In April, Reps. Marsha Blackburn (R-TN) and Jim Matheson (D-UT) introduced the Good Samaritan Health Professionals Act, H.R. 1733, which would ensure that health professionals who would like to provide voluntary care in response to a federally declared disaster are able to do so without facing concerns over potential liability.

The College supports these and other trauma-related bills under consideration because rapid medical response in a disaster can greatly decrease loss of life and improve outcomes, and when disaster strikes, the needs of victims often overwhelm the services available locally. The medical profession has a long history of stepping forward to assist disaster victims. Unfortunately, existing legislation, namely the Volunteer Protection Act, which was enacted in 1997 specifically to encourage such actions, fails to address the issue of liability protections for health care providers who cross state lines to aid disaster victims.

On May 20, the College issued a letter of support for H.R. 984, another trauma-related bill. This legislation would establish a National Task Force to study the impact of Improvised Explosive Devices (IEDs) on returning service personnel’s urogenital organs. Genitourinary trauma, or urotrauma, is a class of wounds that affects the urinary tract and reproductive organs, as well as the kidneys. These injuries are among the most common suffered by service personnel injured by IEDs and have long-lasting physical and psychological effects. Urotrauma accounts for 1 to 10 percent of all war injuries, and, unfortunately, that number is rising. While many physicians are working on this issue, the effort lacks coordination and a centralized mechanism to share findings. This lack of coordination especially affects victims of urotrauma as they transition from receiving services through the U.S. Department of Defense to the Veteran Affairs health care system, where they will receive most of the treatment for these wounds for the duration of their lives.

The National Task Force created by H.R. 984 would better coordinate the care for the victims of urotrauma by examining what is known about the injuries and their treatment and encouraging the development of a plan to address shortfalls where research and care may be lacking.

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### Table: Framework and Progress: Efforts to Repeal the SGR

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<th>Requirement</th>
<th>Senate Finance Committee</th>
<th>House Energy and Commerce Committee</th>
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Scope of practice
The expanding scope of practice for some nonphysician clinicians continues to be of great concern to the College. In an effort to control this problem, Reps. Larry Bucshon, MD, FACS (R-IN), a cardiothoracic surgeon, and David Scott (D-GA) introduced the Truth in Healthcare Marketing Act. The goal of this legislation is to empower patients to make the best health care choices for themselves and their families. This legislation would make it unlawful for any health care professional to make deceptive statements or make misleading claims in advertisements and marketing efforts. Additionally, the bill calls for a study on the frequency and consequences of these disingenuous acts and authorizes allocating funds to the Federal Trade Commission for enforcement.

In introducing the bill, Representative Scott said, “Patients today are confused about the health care system, especially when it comes to differentiating among the qualifications of the many types of health care providers.” That’s why, according to Representative Bucshon, “It is imperative that health care consumers have adequate information, including the education and training level of the health care professionals treating them, so that they are able to make wise healthcare choices.”

EHR
Many surgeons and other health care professionals, particularly those in small, community-based practices continue to have concerns about their ability to comply with federal mandates for implementing electronic health records (EHR). Legislation that Rep. Diane Black, RN (R-TN) reintroduced in March, the Electronic Health Records Improvement Act, would implement much-needed reforms to the Medicare and Medicaid EHR Incentive Program, ensuring that small practices are better prepared to adopt EHRs.

The legislation would make common-sense reforms, including:

• Creating a hardship exemption for solo practitioners and physicians near retirement to avoid exacerbating workforce shortages
• Shortening the gap between the performance period and the application of the penalty
• Expanding options for participation in the incentive program and improving quality measures through incorporation of specialty-led registries
• Increasing participation among rural health care providers
• Tailoring requirements to meet the specific needs of certain specialties
• Establishing an appeals process before application of penalties
• Ensuring that those participating successfully in the Medicaid incentive program are not inadvertently penalized in the Medicare program

The College acknowledges that EHR technology has proven useful in improving patient safety as well as the efficiency of health care. However, the ACS also maintains that the existing program should be modified to ensure its full potential is recognized without creating an undue burden on physicians.

GME
The ACS has continued to actively lobby on legislation related to the education of the next generation of surgeons. On March 14, Sens. Bill Nelson (D-FL), Charles Schumer (D-NY), and Harry Reid (D-NV),
After months of back-and-forth discussions with the College and other stakeholders, on May 28, the Energy and Commerce Committee released its long-awaited legislative draft proposal to reform the Medicare physician payment system.

the Senate Majority Leader, reintroduced the Resident Physician Shortage Reduction Act of 2013 (S. 577). The ACS supports the bill, which would address both short- and long-term workforce demands by increasing the number of Medicare-supported graduate medical education (GME) residency positions by roughly 15,000 over the course of five years.

Reps. Joseph Crowley (D-NY) and Michael Grimm (R-NY) introduced similar legislation for consideration in the House, H.R. 1180. Under both bills, half of the new residency slots must be used for shortage specialty residency programs as defined by the Health Resources and Services Administration. The measure also directs the National Health Care Workforce Commission to study the physician workforce and identify physician specialty shortages.

In addition, Reps. Aaron Schock (R-IL) and Allyson Schwartz (D-PA) reintroduced the Training Tomorrow’s Doctors Today Act, H.R. 1201, which also calls for increasing the number of Medicare-supported residency positions by 15,000 over five years. Moreover, H.R. 1201 will establish Medicare GME accountability and transparency measures. More specifically, the Training Tomorrow’s Doctors Today Act would direct the Secretary of the U.S. Department of Health and Human Services (HHS) to implement a budget-neutral Medicare indirect medical education performance adjustment program and to submit an annual report to Congress on Medicare GME payments. Furthermore, the Government Accountability Office would be required to study and release a report identifying physician shortage specialties along with strategies for increasing health professional workforce diversity.

Workforce issues
ACS-supported legislation designed to address physician shortages has been reintroduced this year. The Conrad State 30 and Physician Access Act (S. 616), introduced in March by Sens. Amy Klobuchar (D-MN), Heidi Heitkamp (D-ND), Jerry Moran (R-KS), and Susan Collins (R-ME), would expand and permanently authorize the Conrad 30 program. Since 1994, the Conrad 30 program has worked to bring thousands of foreign physicians who trained in the U.S. to rural, inner city, and other medically underserved communities.

Under current law, foreign physicians in the U.S. on J-1 visas must return to their home countries for two years after completing residency. Under the Conrad 30 program, these physicians may receive a waiver of that requirement if they commit to providing three years of service in an underserved area. The “30” in the name of the program represents the maximum number of physicians who can participate in each state every year. Congress has reauthorized the program several times, and it is used in every state in the country.

S. 616 would not only remove the sunset provision and permanently authorize the program, but also would improve the functioning of the program and allow it to expand to better meet the nation’s physician workforce needs. (The Conrad 30 program was created on a pilot basis to allow Congress to periodically evaluate the benefit to Americans.)

The bill also makes other improvements to the immigration laws affecting foreign physicians outside of the Conrad 30 program with the same goal of increasing access to medical professionals in underserved communities. For example, under the current Conrad 30 law, physicians may receive a National Interest Waiver green card under the EB-2 category if they serve for five years (three of which can be under the Conrad 30 program) in a medically underserved area or Veteran Affairs facility. Moreover, the legislation would exempt these physicians from the worldwide cap on employment-based green cards.

Medical liability
The March 2013 Bulletin of the American College of Surgeons is a special edition of the magazine, featuring articles drawn from discussions that occurred at the 2012 Medical Liability Reform Summit, which took place last October at the College’s Washington Office. The ACS Division of Advocacy and Health Policy and the College’s Legislative Committee assembled expert researchers, physicians, attorneys, and patient advocates to examine various solutions to the problems associated with the medical liability system and how these
approaches may affect patient care and clinical practice. Potential reforms discussed include alternative dispute resolution, disclosure and offer programs, health courts, and safe harbors. Based on the lessons learned at the summit, the ACS plans to offer new liability reform resources to the Fellows beginning this fall.

Cancer
And lastly, as a member of One Voice Against Cancer (OVAC), the ACS Commission on Cancer continues to request funding for programs essential to the fight against cancer in the fiscal year 2014 Labor-HHS-Education appropriations bill. If the current cuts to existing cancer research and prevention programs take effect, the U.S. risks losing the progress made during the past few years in cancer care, which could cause lasting harm to cancer patients and their families. Cancer research and prevention programs were also subject to sequestration—spending cuts lawmakers believe are necessary to balance the nation’s fiscal budget.

Congress may be enacting laws at a glacial pace, but all of ACS’s priority legislative issues have experienced significant movement this year. The College will be ready for the end of the year frenzy as Congress seeks to address several issues at once.

REFERENCES
Operating room crisis management leadership training:

Guidance for surgical team education

by Kenneth A. Lipshy, MD, FACS, and Anthony LaPorta, MD, FACS
In 1924, W. Wayne Babcock, MD, FACS, raised a critical question: “How efficient a lifesaving station have you in your operating room? Is it safe for me to collapse or have respiratory or cardiac arrest while undergoing an abdominal operation under your care?”¹ Nine decades later, the answer to this question still seems elusive. If one queries his or her surgical cohorts regarding their ability to lead a team through an in-operating room crisis (IORC), the typical response is a boastful rendition of exemplary leadership of teams through any crisis. However, surgeons frequently rate their own ability to lead a team higher than their teammates do.²⁻⁴ Recognizing the limits of surgeons’ leadership skills in routine, non-threatening circumstances, it behooves surgeons to comprehend the skills necessary for effective survival leadership.

Formal orientation of surgical teams to human error as it relates to the creation or perpetuation of an IORC, as well as the systematic role in mitigating the effects of those errors, is necessary for teams to be highly functional in all circumstances. Unfortunately, the lack of this formal training is exacerbated by a progressive reduction in resident operative experience combined with a self-reported decline in self-confidence.⁵⁻⁹ Because IORCs are rare, few health care professionals will have gained notable experience in crisis management during their career.²⁻⁴,¹⁰⁻¹² In addition, anesthesia studies have revealed the following: past experience does not necessarily prevent failure; even senior surgeons make mistakes during IORCs; the signs of developing IORCs are often non-specific, resulting in a

HIGHLIGHTS
- Provides information on strides that the military, EMS, and other first responders have made with respect to training personnel to lead in crisis situations
- Explores the myths regarding performance improvement techniques that are frequently embedded in the culture of high-risk professions, often to their detriment
- Describes how the military and EMS are using a unique simulation training model to train team members in optimal crisis response
delay in the determination of the cause and appropriate corrective action; and during complex life-threatening crises, the team is required to rely upon cognitive tasking far beyond the information processing capacity of the human brain.\textsuperscript{10,11-14}

Given that only an estimated 10 to 20 percent of the population has an ability to remain calm in the midst of a crisis, it is important to know how maladaptive responses to stress arise, how to develop coping mechanisms to overcome maladaptive behavior, and how to effectively lead a team through the risk-management process.\textsuperscript{15-16} Although past experience may not prevent a crisis from developing, understanding the concepts of human error, panic control, and team leadership, combined with repetitive realistic simulation training, should improve the outcome dramatically.

Other high-risk sectors, such as the U.S. military, law enforcement, the aviation industry, and even our anesthesia colleagues, are clearly ahead of surgery with respect to using simulation in disaster preparation. Immersion training, for example, currently in use in the U.S. military, allows for provider intervention in realistic intense environments. (See Photo 1, this page.) Additional information on immersion training is highlighted later in this article. In spite of these innovations in simulation training, however, orientation to cognitive error, maladaptive responses, and rapid process decision making is actually limited in those fields as well.

This article provides information on the major strides that the military, emergency medical services, and other first responders have made in training personnel to lead in crisis situations and overcome maladaptive behavior that may exacerbate these situations. The myths regarding performance improvement techniques that are frequently embedded in the culture of high-risk professions—often to their detriment—are also explored in this article. And lastly, the authors describe a unique simulation training model that the military is using to prepare team members to respond to a crisis in the best possible way.

**ORCM leadership training**

Before they can effectively respond to crisis situations in the operating room (OR), trainees must understand basic concepts in crisis evolution and perpetuation, including maladaptive behavior, as well as effective leadership. The
Before they can effectively respond to crisis situations in the operating room, trainees must understand basic concepts in crisis evolution and perpetuation, including maladaptive behavior, as well as effective leadership.

U.S. Department of Defense and the Department of Veterans Affairs health systems have used the following basic principles to educate residents and personnel in OR crisis management (ORCM):

- **Understand how IORCs evolve.** On any given day, a seemingly minor error or spontaneous, out-of-the-blue event coupled with underlying systemic issues, poor coping mechanisms, subsequent mistakes, and faulty system safety nets may evolve into an IORC. This trajectory exists when the event is unexpected, potentially life-threatening, and requires time-critical, rapid decision making. Mitigating the consequences requires movement away from the current trajectory. Effective system design combined with preemptive team training should prevent propagation of an IORC to a disaster.17-20

- **Become familiar with time-critical, rapid-process decision-making strategies.** It is important that trainees understand the decision-making processes surgeons use when they encounter time-critical events. Cohen and Pauley have described problem-recognition and problem-solving pathways in detail. Following an unexpected event, according to these researchers, people subconsciously detect that a change has occurred. At this juncture either maladaptive or adaptive trained responses will guide individuals either to failure or success, respectively. Adaptive individuals will comprehend all is not normal and begin developing risk-analysis scenarios in their mind to seek viable alternatives.17,21-22

- **Understand how maladaptive response, effective team command, and risk management affect outcomes.** The goal at the onset of an IORC is to successfully manage maladaptive behavior and to organize, assess, and plan.

  The road to successful navigation of a team through a crisis hinges on team recognition of the stages of crisis evolution and their ability to rapidly command the situation. To avoid confusion under stress, many responders use the easy mnemonic STOP—Stop! Think! Observe! and Plan!15,17,21-23

  The initial stage of this process centers on gaining control of maladaptive responses by stopping all activity. The fight or flight response, which most people experience in unexpected situations, typically leads to hesitation or panic. Trained medical team members should seek to minimize these maladaptive responses to stress and threats.15,26-27 Team members must be capable of rapidly accepting that the situation is no longer normal, and then adapt and begin an organized risk-assessment and planning-execution process.

  Once these negative responses are under control, effective leadership, precise communication, risk-assessment, planning, and execution create a pathway to a successful outcome.17,20,28-29

  A leader who will take command of the situation should be selected well in advance of a crisis to avoid potential confusion and anarchy. The leader’s first responsibility is to recognize and manage potential cognitive errors, including fixation errors, oversteering of the situation, and a loss of situational awareness.

  Fixation errors occur when people fail to acknowledge a change in their environment and construct a familiar mental image based on past experience and fixate on it. Because they are unable to discount that impression, they cannot recognize what is really happening in the situation at hand and respond inappropriately.17,20

  Oversteering can also complicate matters. This behavior commonly occurs when people attempt to solve a new problem with an excessive amount of normally acceptable actions. For example, when people find themselves lost, they frequently continue to wander and become more lost, instead of stopping to become oriented. Stress worsens this response.

  Loss of situational awareness occurs when the team is overstressed, distracted, or trapped in confirmation biases and, as a result, lose touch with reality.17,30

  Fatigue, environmental stressors, and distraction also increase the risk for errors. In multiple studies, surgical mistakes increased significantly with simple increases in flow disruptions, such as communication failures, equipment or technology problems, extraneous interruptions, and issues in resource accessibility.3,17,31-33

  Just as the leader must be selected before a crisis develops, ground rules regarding team participation must be established in advance of a threat. Team participants must understand their individual roles during a crisis to avert further tension and confusion.
Basic communication processes also must be in place. Information passed to the team leader must be explicit, clear, concise, and focused.

Effective organizations practice and maintain orderly processes for risk-assessment, planning, and action. Principles that can be applied in developing these processes include defining the goal, gathering information, prognosticating potential scenarios, creating an action plan, executing the strategy, and reassessing the results.17,26

After any crisis, debriefing is critical. Team members should review the positive and negative aspects of care provided during the IORC and seek to answer three important questions: How did this happen? How did we respond? And what other solutions might have been used?17,14

Common myths
Unfortunately, many institutions are still misinformed about the benefits of crisis training and the establishment of protocols to guide team behavior. Following are some of the myths that inhibit the use and adoption of these techniques, many of which are deeply ingrained in the surgical culture:

• Team training and OR checklists have never been proven to provide substantial benefit. That’s what the “top guns” in aviation used to believe in the 1970s, but studies conducted by the aviation industry and the U.S. Coast Guard have shown otherwise. In fact, several decades later, aviation and military leaders have not only come to accept standardization of cockpit management training (CMT), but are at the forefront of implementing these procedures in their institutions. Surgical team leaders inevitably will have to accept the proven benefits of CMT to the patients and the surgical team.35 As the military has demonstrated, new technology will change surgical training, and acceptance of OR “cockpit” training will follow suit (see related story, page 64).

• Training needs to be run and maintained by organizational leadership—not by the surgeons. Former American College of Surgeons (ACS) Executive Director Thomas R. Russell, MD, FACS, reminded us in 2006 that “ultimately, it is the surgeon who is responsible for ensuring that the entire operative team delivers safe care.”36 Salas noted in 2007 that although medical team training was in wide use, if physicians did not believe that teamwork was a critical element in the elimination of avoidable medical error, creating effective teams would be “an uphill battle.”37,39 The attending in charge sets the tone for the entire health care team, and therefore, must serve as the champion of IORC team training and its potential benefits.37 Changing a culture to one of continued vigilance requires cooperation throughout an institution, including administrative, medical, and support staff.

• I am able to lead any team through any crisis without concern. During a post-incident evaluation, a pilot once stated, “We have to anticipate the worst case scenario. We are not just up there to press a button and trust in the wonders of modern technology. We have to be ready for this eventuality.”38 Until surgeons recognize that preparation for these rare, worst-case events is essential, continued mishaps and disastrous outcomes will occur. There is minimal evidence in the literature that the field of surgery has caught up to other high-risk fields with respect to crisis management. Overconfidence and a belief that these events are too rare to be of concern could have disastrous consequences when an IORC arises.2-4

• We don’t let OR crises affect us. Adverse events create distraction and stress for the surgeon and team members. A 2008 survey of ACS Fellows showed that 8.9 percent of respondents committed a medical error within three months of completing the survey; lapses in judgment, fatigue, lack of concentration, and other distractions contributed to these mistakes; and medical errors and subsequent stress often led to burnout, alcoholism, and suicidal ideation. Errors inevitably increase stress and strain, create more distraction, and lead to more mishaps. Persistent stress and strain in an individual who is inadequately equipped to tolerate those forces does affect the OR team and institutions as a whole—often to the detriment of their functionality and reputation.39-41

continued on page 30
PHOTOS 2A–2E. LIVE IMMERSION SCENARIO

A and B show an actor preparing for the scenario wearing a cut-suit.

C and D show the actor placed in the center of a disaster scenario. The realism of the battle scene is fortified through accurate location replication and visual, auditory, and olfactory input, including gunfire and explosions.

E shows the actor (now a live “victim”) wearing the suit that includes movie-grade internal organs that are exposed by skin that must be accessed using appropriate skin incisions.
The time has come for surgeons to set aside these myths and misconceptions so that the proper protocols are in place to handle any problem in the OR—no matter how big.

Effective ORCM training through simulation

More than a decade ago, it was discovered that collateral damage caused by military personnel and first responders was sometimes worse than the situation to which they were responding. This inability to respond appropriately and avoid further harm was a consequence of training that was frequently not life-like and therefore did not simulate the same epinephrine-surging environment encountered in a real-world event. Poor knowledge of cognitive errors led to mishaps attributed to individual ignorance or lack of adherence to known protocols. Soon thereafter the face of crisis training would change and evolve.42

To understand how to correct the problems with ORCM, surgeons must understand the basis of the mistakes just after such an event has occurred. Only recently have live, interactive immersion training, team training, and technical training advanced enough to be effective. Approximately 20 years ago, the groundbreaking work of U.S Navy consultant Bruce Siddle helped demonstrate that the immediate stress response to any crisis includes a loss of fine motor skills, amnesia, inability to listen effectively, and tunnel vision. He was able to correlate the immediate effect of the mistakes made during the immediate response phase to the eventual outcome of events.42
Based on Mr. Siddle’s findings, the U.S. Marine Corps developed immersion training rooted in the theory of stress inoculation. Stress inoculation involves training that puts the subject’s visual, auditory, olfactory, and tactile sensations in the actual environment and under real-world conditions. This training, now trademarked as Hyper-Realistic Training, has been developed by U.S. Marines and the U.S. Navy with the assistance of Strategic Operations, Inc., which is a part of Stu Segall Productions, a large independent television and movie studios. Now a mandatory course for medical personnel in both branches of the military, more than 1,000 health care practitioners—from corpsmen and women to surgeons—have participated in Hyper-Realistic Training.

This training system, developed over the last 10 years, now includes a unique simulation device to train health care professionals in team management and open surgical management. This instrument, known as the “cut suit,” allows trainees to develop skills needed for major hemorrhage control and to perform open laparotomy, open thoracotomy, cricothyroidotomy needle decompression, and closed thoracostomy (see Photos 2A–E, page 29). The suit is worn by a human actor, thereby accurately simulating the real-life stress involved in a major crisis.

This type of training had proven successful in operative management and training of the fleet surgical team led by U.S. Navy Commander Tuan Hoang, MD, FACS, both on ship and with a Marine ground force (see Photo 3, page 30). CDR Hoang’s crisis management team scenarios initiate in the emergency

**REFERENCES (CONTINUED)**

17. Lipsky KA. Crisis Management Leadership in the Operating Room: Have You Prepared Your Team to Handle Any Crisis They Might Encounter in the OR, or Are They Destined to Fail? San Diego, CA: Creative Team Publishing; 2013.
REFERENCES (CONTINUED)


continued on next page
only known to the medical director and who happened to be in Vail when the disaster occurred. During the emergency laparotomy, a need arose to also open the chest, posing a crisis as the team was not set up for any of these emergent procedures. The OR staff had no prior knowledge that this event would happen. The simulated event evaluated team management and maladaptive behavior during an IORC.

**Just the beginning**

The simulated events described in this article are just the beginning for this type of immersion training in medicine. An actual 3-D simulated OR environment and software are being developed to record and replay every movement the surgeon and team makes. The growth in immersion training highlights the fact that intense military techniques are currently being integrated into civilian medical training and are not merely a distant thought.

It behooves surgeon leaders to move this issue toward the front burner. Although IORCs are rare, they are inevitable in any surgical facility, and failure to properly prepare the OR teams may have disastrous consequences for the patient, the surgeon, the team, and the institution. With current military training expertise available, it is up to surgeons to develop this training at all major U.S. medical centers. Ignoring the problem or anticipating these situations are manageable should they arise should no longer be acceptable alternatives. ♦

**Editor’s note**

Portions of this manuscript have been excerpted from *Crisis Management Leadership in The Operating Room: Have You Prepared Your Team to Handle Any Crisis They Might Encounter In The OR, or Are They Destined to Fail?* written by Kenneth A. Lipsy, co-author of this article.17

None of the opinions noted in this manuscript represent the formal opinions of the U.S. Military and are expressly those of the authors.

**REFERENCES (CONTINUED)**

Surgeons lead educational program

to improve kidney care in Vietnam

by
Douglas P. Slakey, MD, and
Ingemar Davidson, MD, FACS
This course was designed to provide local physicians and allied health care providers with the knowledge and skills necessary to improve the delivery of care to ESRD patients using a multidisciplinary approach.

HIGHLIGHTS
- Describes how the authors used a scholarship from the VEF to develop and provide an educational course designed to improve the care and outcomes of patients with kidney disease
- Explains why this training was necessary in Vietnam and the program’s purposes
- Presents details on how a combination of live lectures and interactive webinars, along with simulation, were used to train health care professionals in effective kidney care
- Considers the future of this type of training program and its role in global health care

The need for surgeons to help improve the availability and quality of care provided to underserved populations, especially in developing countries, is ever-growing. When most surgeons think of volunteering, a surgical mission trip focused on performing a series of operations over some period of time is usually what comes to mind. These surgical missions can be very important to the patients served and especially rewarding to the surgeons and surgical team. The Bulletin has published many reports of such experiences over the years.1-5

Another venue for Fellows of the American College of Surgeons (ACS) to contribute to improving global health care is through education. In 2012, one of the authors, Dr. Slakey, received a scholarship from the Vietnam Education Foundation (VEF) to develop and provide an educational course designed to improve the care and outcomes of patients with kidney disease. The title of the educational project was Multidisciplinary Approach to Optimize the Care of Renal Patients and was designed to provide evidence-based knowledge. The course objectives were reinforced using simulation training and strategies for systems development to improve patient safety, outcomes, and cost-effectiveness of care. Human factors, communication, and team training were emphasized in all aspects of the course. The entire project lasted six months, from September 2012 to March 2013. The positive reception of the course material and enthusiasm of participants exceeded expectations. This article provides details on the course design and its evolution, the practical applications of this approach to surgical volunteerism, its impact, and future plans.

Program development
Funding for the entire project was through the VEF, an independent federal agency created by the U.S. Congress in 2000.6 The mission of the VEF is to strengthen the U.S.-Vietnam relationship through educational exchanges. A board of directors composed of cabinet members, senators and representatives, and presidential appointees governs the VEF.

The individuals involved in the development of the program viewed it as an opportunity to create and deliver an educational program that would be durable and reproducible. The proposal was based on the belief that surgical leadership provides a vital role in many aspects of the care of the end-stage renal disease (ESRD) patient including the obvious surgical considerations such as dialysis access (fistula, graft, peritoneal catheter) and transplantation.

Photos, opposite, left to right:
Top row: Sunrise in Da Nang, Vietnam; teaching during an operation at Hue Central Hospital.
Middle row: Surgical intensive care unit, Hue University of Medicine and Pharmacy; Dr. Slakey demonstrates ultrasound guided central venous catheter placement during simulation course.
Bottom row: Dr. Davidson demonstrates ultrasound mapping for dialysis access surgery planning; Hue University of Medicine and Pharmacy.
The underlying objective of the Multidisciplinary Approach to Optimize the Care of Renal Patients course was to provide an educational foundation to help physicians improve the care of patients with kidney disease. In Vietnam the actual incidence of ESRD is unknown but is reportedly as high as 680 per million, nearly twice the rate of the U.S. Because the provision of health care to ESRD patients often is complex and costly, many patients in Vietnam are unable to receive the treatment necessary to keep them alive.

This course was designed to provide local physicians and allied health care providers with the knowledge and skills necessary to improve the delivery of care to ESRD patients using a multidisciplinary approach. The course provided evidence-based information to enhance the understanding of methods used to treat ESRD patients and emphasized a coordinated approach to optimizing the timing of the various therapies and managing the surgical, pharmacological, and other complications that may occur. Importantly, this course included information and training in the role of human factors in the delivery of care—a concept that emphasizes the importance of the entire health care team in optimizing patient care. The course included both lectures and simulation training so that students could practice the methods and techniques discussed. Using the knowledge and skills taught during the course, the students should be better able to provide safer, more effective health care and thereby reduce medical errors and costs. As a consequence, more patients will have access to the care they need.

**Course design**

Fortunately, the administration and faculty at the Hue University of Medicine and Pharmacy, Hue, Vietnam, were quite supportive of the program. Prof. Lee Dinh Khanh, MD, and Nguyen Vu Quoc Huy, MD, were particularly helpful in organizing the course and providing local support.

### TABLE 1. ON-SITE LECTURES

- ESRD treatment time line
- Why a multidisciplinary team?
- Simulation for medical education
- Dialysis (renal replacement) for the newly diagnosed ESRD patient: Patient considerations, timing, measuring outcomes, cost, and effectiveness
- Using human factors to improve outcomes
- Checklists and patient data registries—ensuring optimal patient care
- Managing the complex ESRD patient—special techniques for surgery and medicine
- Simulation education—a way to improve team function and patient safety
- Ultrasound evaluation for central venous catheters and dialysis access
- Best practice for placement of central catheters—catheter last or fistula first?
- The OR cockpit: Standardization, checklists, and communication skills
- Improving communication when caring for patients
- Surgery techniques: Best practices for using expanded polytetrafluoroethylene (ePTFE) grafts for dialysis
- Complex decisions in vascular access: Interesting cases
- Safety and outcomes—the OR cockpit and communication
- Checklists and data—the next steps in measuring outcomes
- Simulation sessions—what to expect
As previously stated, the course was divided into two basic formats—lectures and simulation sessions. Lectures were conducted both on-site at Hue (17 lectures) and in real-time via the Internet (12 lectures). Tables 1 and 2 (page 36 and this page) feature the titles for all lectures offered in the course. For the on-site lectures, the lead author, Dr. Slakey, made two trips to Vietnam—the first was September 17–27, 2012, and the second trip was March 8–16, 2013. Co-author Dr. Davidson accompanied Dr. Slakey on the second trip.

Initially, 35 students—a mix of surgeons and nephrologists—were enrolled in the course. Over time, the number of physicians, medical students, and health care workers who took advantage of the course increased substantially. By the time the March final full-day course was convened more than 100 physicians and health care workers were in attendance.

The real-time Internet lectures were presented between October 2012 and March 2013 using Adobe Connect Software. Multiple users from different sites could log on simultaneously, and connection speeds were set so that wireless connections would work well. In addition to voice and video feed via the webcam, it was possible to have interactive educational sessions with uploaded course content that included PowerPoint slides and documents. Video could be delivered as part of the real-time lectures by sharing the host computer screen, and students could ask questions by voice or by typing their queries, allowing the presenter to respond to questions as they arose.

It also was possible to record lectures and then post the file online where students could access the recorded sessions. This Web-based access afforded students the opportunity to review presentations at their own pace. Also, because many of the students were physicians who sometimes had clinical duties that interfered with their ability to view the lecture live, the recording feature allowed students to access lectures at any point after they were presented.

As part of the scholarship funding, educators at the Hue University of Medicine and Pharmacy were able to have interactive educational sessions with uploaded course content that included PowerPoint slides and documents. Video could be delivered as part of the real-time lectures by sharing the host computer screen, and students could ask questions by voice or by typing their queries, allowing the presenter to respond to questions as they arose.

### Table 2. Real-Time Internet Lectures

- Central access and ultrasound
- Peritoneal dialysis
  - How it works
  - Patient evaluation
  - Surgical considerations
- Hemodialysis (HD)
  - How does HD work?
  - HD outcomes
  - Catheter, fistula, or graft?
- Surgery for dialysis access
  - Surgical planning, patient evaluation
  - OR check lists
  - OR cockpit concepts
  - Consent
- AV fistula surgery
  - Anatomy
  - Techniques
  - Optimizing outcomes
- Managing complications of dialysis access
- Kidney transplantation
  - History
  - Outcomes
  - Creating a transplant team
  - Deceased donor evaluation
- Kidney transplantation
  - Evaluating the patient
  - Evaluating a living donor
- Donor operation
  - Deceased
  - Living
- Kidney transplant operation
- Immunosuppression
- Team training—simulation education
  - Communication
  - Leadership
  - Including the team
This project was a valuable educational experience for Tulane’s surgical residents and aided in peer-to-peer interaction with the medical students, residents, and physicians taking the course in Vietnam.

TABLE 3. SIMULATION SESSION TOPICS

- Ultrasound evaluation for central venous catheters and dialysis access
- Best practice for placement of central catheters
- The OR cockpit: Standardization, checklists, and communication skills
- Improving communication when caring for patients
- Surgery techniques: Best practices for using ePTFE grafts

In accordance with the mission of the VEF, surgical residents at Tulane University School of Medicine, New Orleans, LA, were involved in the preparation and presentation of the live Internet lectures. The Tulane surgical residents acted as teaching assistants. They prepared a 20–30 minute grand rounds-style presentation for each Internet lecture topic, and they also presented with Dr. Slakey during the live Internet lecture. This project was a valuable educational experience for Tulane’s surgical residents and aided in peer-to-peer interaction with the medical students, residents, and physicians taking the course in Vietnam. The Tulane residents were very positive about their experience and enthusiastic about participating in future international education exchange programs. Certainly, it can be anticipated that this degree of participation will encourage cooperation and educational exchanges in the years to come.

Each student received one textbook titled Peritoneal Dialysis: Surgical Technique and Medical Management. This textbook, along with the companion DVD that illustrated surgical technique, was a valuable resource for the students.

Using simulation for training

The conclusion of the course consisted of one week in Hue, March 8–16, 2013. At this point in time, the authors participated in patient clinics, in-patient rounds, and operations. This clinical activity provided an excellent opportunity to experience and discuss the realities of caring for patients with ESRD in Vietnam, and to reinforce the application of the evidence-based

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This content is from the Bulletin of the American College of Surgeons, beginning February 2014. It is part of the American College of Surgeons’ 2014-2015 Bulletin package. To order a copy of the Bulletin, please contact ASC的价值 evaluate for central venous catheters and dialysis access, Best practice for placement of central catheters, the OR cockpit: Standardization, checklists, and communication skills, Improving communication when caring for patients, Surgery techniques: Best practices for using ePTFE grafts.

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Using simulation for training

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material presented during the course. Throughout the course, special attention was paid to the societal, economic, and cultural factors that affect the delivery of care to the ESRD patient in Vietnam. Incorporating on-site clinical and educational activities into the course was critical to its success.

March 14 was the last full day of the conference and included simulation training. Table 3, page 38, lists the simulation session topics. Two device-manufacturing corporations with an interest in the ESRD patient population helped support the conference. SonoSite (FujiFilm) professional education personnel participated and supplied a portable ultrasound machine for use during the simulation sessions. Covidien’s Vietnam business development manager brought peritoneal dialysis devices and central venous catheters as well as instructional information and videos. Having access to these devices ensured that the simulation sessions allowed for hands-on interactive training.

Grant funds allowed for the purchase of a central vascular catheter-training simulator that Dr. Slakey brought from the U.S. and donated to the Hue University of Medicine and Pharmacy. Included with the simulator were many spare parts and central venous catheters to allow for continued use of the simulator after the completion of the course. Simulation training for ultrasound-guided central line placement included a checklist of steps that should be completed prior to use. This training was very popular with the physicians, and the facility should be able to use this simulator for years to come. In addition to ultrasound central line placement, the simulation sessions included practice with ultrasound mapping of veins for dialysis access, something most of the surgeons had only read about and discussed during lectures.

During the simulation sessions, the students had an opportunity to practice communication and health care team training—subjects that had been presented and discussed in the lectures. Course participants were enthusiastic about the communication skills and team training. Despite potential language barriers, we found that students were quick to apply the knowledge and skills they gained. Students were able to appreciate the positive influence of clear, concise, and accurate communication on health care. The simulation sessions included practicing communication between physicians and other health care workers as well as between physicians and patients.

One of the more interesting communication practice sessions involved learning how to talk to patients about bad news or adverse outcomes. During the simulations the entire audience of students interacted with each other and offered their opinions on the appropriateness of their colleagues’ communication, body language, and overall approach to the scenario. Post-simulation debriefing sessions helped to reinforce the knowledge and skills that the students had learned.

The students who completed the entire course were given course evaluation forms. Feedback regarding the usefulness of the material presented in the course was uniformly positive. All participants stated that they would directly incorporate the knowledge and skills learned into daily patient care. Notably, each student committed to a continuing education program in which they will serve as a resource to other health care professionals.

Looking ahead
Many exciting opportunities for continuing the educational objectives of the course are available. First, the students were taught information and skills that can be used to teach other health care professionals throughout Vietnam. At the end of the course, all of the students expressed optimism that they would be able to train other clinicians in the techniques that can be applied to improve the care of patients with ESRD. This is a classic example of training new trainers, which was a goal of the course.

At the end of the course we discussed the potential for establishing a system for clinical data collection.
and analysis to monitor outcomes of ESRD patient
treatment. This is a significant need within Viet-
nam, which presently lacks a centralized or consist-ent method for monitoring the clinical outcomes for
ESRD patients. In addition, we discussed implement-
ing health care checklists, which would be developed
using evidence-based knowledge and function as a
protocol to guide the physicians and other health
care practitioners in providing optimal patient care.
These initiatives could be formulated into a second
(follow-up) VEF course. The second course would be
designed to provide the students with the knowledge
and skills necessary to implement the ESRD check-
list, to establish a clinical study to determine if the
checklist is effective, and to publish the results in a
peer-reviewed international journal.

In summary, the objectives of the Multidisci-
plinary Approach to Optimize the Care of Renal
Patients course were met and actually exceeded the
authors’ expectations. The students were enthusiasti-
astic about both the Internet and on-site lectures. The
simulation session at the end of the course was very
well-attended and provided an unparalleled oppor-
tunity for the students to actively practice the most
important skills they learned during the course.
This opportunity has improved our understanding
of health care in Vietnam and also of the global inter-
est in improving health care outcomes and clinical efficiency.
The course has provided the students with an
improved understanding of how to optimize the treat-
ment of patients with ESRD and how to build and train
health care teams. This course will certainly have a
lasting effect on the lives of many patients. Finally, the
experience of developing and delivering this course has
reinforced the belief that surgeons as educators have a
significant impact on improving patient safety and
health care outcomes.

REFERENCES
1. Babakhani A, Guy SR, Falta EM, Elster EA, Jindal TR,
Jindal RM. Surgeons bring RRT to patients in Guyana.
2. Savarise M, Como JJ. ACS Fellows provide surgical
2013;98(4):30-35.
3. American College of Surgeons. Cruise to South America:
The College’s first international outreach effort. 1923. Bull
4. Kim Cj, Wedderburn RV, Ibanga I. Short-term surgical
missions make a difference: A life-changing case in Ibi,
5. Chu QD, Zibari G, Ho HS. Surgical volunteerism in
Vietnam: Surgeons and educators strengthen the U.S.-
6. Vietnam Education Foundation. Welcome message from
the VEF executive director. Available at: http://home.vef.
8. Davidson I, Gallieni M, Saxena R. Peritoneal Dialysis:
Surgical Technique and Medical Management. Dallas, TX:
DIVADI, LLC; 2012.
Centennial reprint:
The College’s ongoing commitment to the quality imperative

As part of the American College of Surgeons’ yearlong Centennial celebration, the Bulletin has been reprinting articles centered on the issues and developments that have defined the character and integrity of the organization for the last 100 years. To close out this series, this month’s reprint from March 2003 provides details on the College’s ongoing efforts to improve quality and patient safety.

The authors look back at the College’s earliest contributions to quality improvement and its development of registries to monitor and identify effective treatments for trauma and cancer. They also describe the drivers of the public’s more recent demands for quality improvement and public reporting of outcomes data and describes the College’s initial efforts to bring the National Surgical Quality Improvement Program into the private sector through what is now known as ACS NSQIP®.

Given the ground this article covers, its publication here seems a fitting way to end the College’s reflections on the past 100 years and to explore the issues and College programs that will define the future of surgical care. ♦
It’s difficult for many of us in practice to comprehend the speed and intensity of the health care quality measurement and public reporting movements. The combined pressures of increased expenditures, soaring medical liability premiums, and patients’ perceived threats of harm have created an overarching imperative to improve quality, control costs, and help patients become better health care “consumers.” Payors and consumer activists are insisting that physicians and other providers become more accountable for the quality of medical care they deliver.

In response to these demands, policymakers are seeking ways to show that access to high-quality, affordable care is possible. This year they hope to make it easier for consumers to access public quality reports for nursing homes and home health care. These reports allow patients to compare performance measures of facilities and make educated decisions about where to seek care. However, the challenge lies in defining what works over time and when there are fewer financial resources and higher patient expectations.

A surgical tradition

The College has been at the forefront of the quality improvement movement since 1913, when it was founded to set patient care standards and uphold the enduring ethical principle of “first do no harm.” Ernest A. Codman, MD, FACS, though shunned in his day for his insistence on tracking outcomes, proved that surgery could measure and police itself. Surgeons were the first clinicians to talk directly to patients about cancer treatment options in a consumer publication, such as Ladies’ Home Journal. In 1915, the College hosted forums throughout the U.S. to talk about early detection and to identify cancer treatments that helped increase survival rates. Then in the late 1920s surgeons once again became patient advocates, insisting that hospitals and surgical suites meet acceptable standards of care. This effort set the foundation for the Joint Commission on Accreditation of Healthcare Organizations (JCAHO).

Since the early 1940s Fellows have developed systems to improve our ability to monitor and identify effective treatments for cancer. Then in the late 1960s, as it became clear that early intervention for trauma patients within “the golden hour” meant a higher survival rate, the
College worked to certify and train members of state networks. Ever since, the College has been committed to tracking what worked best for care and survival of the trauma patient. Fueled with the data, the College has helped develop responsive, statewide networks to secure the best quality of trauma care for our patients at every step of the emergency response process. Our vision for the future includes further analysis and expansion of two benchmarking tools—the National Cancer Data Base and the National Trauma Data Bank™—so that patients and clinicians can identify areas for improvement, as well as set best practices.

Drivers of the movement

In the last decade, a convergence of factors has driven health care policy. In 1999, the Institute of Medicine (IOM) report, *To Err Is Human: Building a Safer Health System*, challenged the entire American health system to develop a better way to protect lives. Subsequent reports from the IOM and purchasers have caused a ripple effect, increasing the cry for a more transparent quality improvement and public reporting system. The continued drumbeat about “risks” that exist within the system, coupled with increased consumer expectations about good outcomes, has stunned medicine and may have undermined the confidence that our patients have in our judgment. What caused this shift in the patient care landscape, and what is the College doing about it?

At the end of the last decade it became increasingly clear to policymakers that previous attempts at reform had failed. Managed care was unable, over time, to both control costs and assure quality. The statewide health plan implemented in Oregon suggested that health care services and funding could and should be prioritized, but that system, too, failed to control costs.

These and other health care reform efforts of the early 1990s were frustrated by the inability to retrieve useful outcomes data from health care information technology systems designed to account for claims. Effective use of resources, we found, depended on a more well-informed and engaged patient, as well as the ability to stay current with fast-paced innovation, develop thoughtful treatment plans, effectively manage a practice, and so on.

New expectations

Today, payors are asking the medical professions to be more forthcoming with data, measuring their performance and ultimately being held accountable for the quality of care provided to their beneficiaries. Accountability means something different to each stakeholder. Many physicians have been surprised by the tacit challenge to their commitment to providing the highest quality care. It has become increasingly clear that few policymakers and consumers understand the rigorous requirements for board certification or membership in many professional organizations. Fewer still understand the rigor required and the ongoing education efforts provided by Fellowship in the College, or the scrutiny peers offer on our caseload and experiences during surgical services reviews and in morbidity and mortality conferences.

Instead, purchasers are reacting to the steady climb in health care costs. Once again, they are looking at ways to “buy better.” Their position: set standards for care, remove wasted efforts and cost from the system, direct patients to the known high-quality providers, and apply volume-based purchasing theories. The expected result: better quality for patients and lower costs for purchasers. While some of these principles have worked well to improve efficiencies on the assembly line, patient care doesn’t always lend itself to following specific standards. Patients’ needs, conditions, and circumstances are too varied.

The idea of measuring and reporting quality makes good sense. But defining and implementing the “ideal” quality principles have become increasingly difficult. Medical standards and practice have become more sophisticated in less time. The half-life or turnover of medical information and technology has compressed to four years. More patients survive longer, and in the end require more expensive care. The complexity of care, the proliferation of lifesaving technology, and the scarcity of our resources come together in what seems to be a “value” collision course. Yet, purchasers have not been forthcoming in offering to pay for the additional data collection and analysis. Hospitals burdened with providing more than 30 performance measures want surgery to define three or four comprehensive (and timeless) measures of quality to track over time. It becomes even more
important for all the stakeholders to sit down and determine what will provide the highest value for our society and, ultimately, what it is worth to each of us.

**Culling the pearls**

To achieve some consensus on what constitutes quality, the country’s largest purchaser of health care services, the Centers for Medicare & Medicaid Services (CMS) is encouraging an informed discussion among all the stakeholders—consumers, payors, health service researchers, physicians, and other providers.

The National Quality Forum (NQF), a private sector offshoot of the national health care reform efforts, was established to encourage that discussion of the overarching quality standards in health care with all perspectives at the table. NQF’s mission is to develop consensus on what medical insiders understand to be quality care and to translate that information to the public. The difficulty has been in defining quality and determining what sort of comparative information is useful to patients as they select providers of elective care. Perhaps one of the fundamental sticking points in this quality discussion has been the process of collecting meaningful data, without burdening the health system any further. To some activists, bad data are better than no data. Based on our 90-year history of assuring quality, the College is of the contrary opinion that only decisions based on sound data are in the best interests of the patient.

Many clinicians, however, have been frustrated by the pressing urgency to report data that aren’t reliable. It is not that they are unwilling to come forward with that information, but their training and commitment, aimed at ensuring that patients have accurate and meaningful data, means a dedication to fully validating any procedures that will affect their patient. So, while each of us knows there is a relationship between quality, safety, and cost, it has been difficult to retool the delivery system and to get the data that will help us uncover wasted resources and to identify obstacles to providing the most effective therapies and systems.

It doesn’t have to be such a conundrum. Surgery has never lost sight of our fundamental responsibility to be the patient’s quality care advocate. In addition to ongoing work in cancer and trauma, last year the College received a $5.2 million grant from the Agency for Healthcare Research and Quality (AHRQ) to further validate the Department of Veterans Affairs (VA) National Surgical Quality Improvement Program (NSQIP) in 14 private sector hospitals.

NSQIP is an exciting, risk-adjusted, surgical outcomes “registry” and benchmarking effort that is credited with improving mortality rates by 27 percent and the morbidity of cases by 47 percent in 122 VA hospitals. This system has been at work in the VA since 1996 and provides pre-, peri-, and postoperative observations of all surgical patients and conditions for up to 30 days after a procedure.1 Shukri Khuri, MD, FACS, and the many surgeons who designed the system realized that it needed to provide risk- and complexity-adjusted outcomes that could be compared to national averages. Speciﬁcally trained registered nurses, biostatisticians, and surgeons collect and analyze the data, which are entered into a Web-based collection and benchmarking system. The resulting sets are risk-adjusted and compared with information in a database of more than 900,000 patients.2

Once the information is processed, the surgeon and the surgical service are able to compare their observed versus actual outcomes experience (o/e) with the national average and comparable hospitals. Additional research on the NSQIP system suggests that the national database offers us the information necessary to identify outliers. It also suggests that when volume without risk adjustment is used as an indicator of quality of care, in 60 percent of the cases the patient could have been sent to a lower performing facility.3 In addition, comparison with national data sets serves to highlight costly practices and may be used to predict the likelihood of difficulties for particular patient proﬁles and procedures.

The challenge for the College and the VA was to show that the system worked with a non-static population. The three initial test sites—Virginia, Kentucky, and Emory University in Atlanta, GA, showed that the system worked with populations not represented in the VA. As part of the grant, the College has engaged 11 additional private sector centers in Michigan, Missouri (St. Louis University and Washington Universities), Utah, Florida, California (University of California, San Francisco), Maryland, New York (Columbia and Cornell Universities) and Massachusetts (Massa-
chusetts General Hospital) to put NSQIP to the test. After one year, the investigators are pleased with the tests of the program’s risk adjustment, data collection, and benchmarking capabilities in hospitals that serve a broader population than typically reflected in the VA systems. While preliminary results will be reported this spring, principal investigator Dr. Khuri and the site investigators believe that this model could provide a data collection system for the entire surgical profession. This kind of system has the prospect of serving, in very much the same way as the tumor registry program that the Commission on Cancer of the College coordinates with the American Cancer Society, as a comparative quality-improvement database. The investigators, while concentrating on providing meaningful data to surgeons, understand the need to explore how the public might use the information to assess the strengths of a surgical service. National leaders in the health care measurement and public reporting arenas, as well as large health plans, are very interested in NSQIP, and we are currently pursuing opportunities to validate it further.

**A long-term situation**

In the meantime, it is essential that surgeons understand that the public reporting movement will not go away. Purchasers are demanding greater transparency of what is meaningful and why in health care. They want to understand the data that medical insiders consider when evaluating care. The College’s Division of Research and Optimal patient care is committed to developing promising improvement systems and expanding the use of current College data sets.

To set a well-informed course for the measurement and reporting of quality surgical care, the College will be hosting a meeting of the leadership of the Surgical Specialty Societies in March. The group will hear from all the stakeholders involved in this national effort and hopes to develop principles that will guide surgery’s efforts in the legislative and regulatory arenas. While no bills are pending in Congress, the College’s Health Policy Steering Committee’s workgroup on quality and patient safety is mindful of the intense pressure to develop report cards, as well as workable and meaningful standards that the public may use to evaluate and purchase health care. CMS has been charged with finding meaningful standards that can be implemented within the calendar year. AHRQ will be releasing the National Quality Healthcare Report this fall. The subcommittee will continue to assess, monitor, and advocate on behalf of surgeons in this arena. In the months to come, we hope to continue our role by convening several work groups to address the issue of what information is meaningful for surgeons to report and for their patients to use in evaluating quality of surgical care.

Despite the upheaval in health care, the College is prepared to maintain its historical role as the patient’s quality advocate. We look forward to the results of the NSQIP trials in these health systems. We also hope that in the months ahead, more surgeons will help legislators and regulators understand what it will take to bridge that gap between what we know is clinically valuable and what our patients want to know about the quality of the care they receive.

For more information about the College’s continuing efforts to measure quality of patient care and application of standards, please go to [http://www.facs.org/oebs/otherendeavors.html](http://www.facs.org/oebs/otherendeavors.html). For more information about the College’s work translating quality measurement to policymakers, contact lamar.mcginnis@cancer.org or bcebuhar@facs.org. If you would like to learn more about NSQIP and other quality of care initiatives, contact the Division of Research and Optimal Patient Care or Karen Richards in the Office of Evidence-Based Surgery, krichard@facs.org.

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**Dr. McGinnis**

*Clinical professor of surgery at Emory University Medical Center in Atlanta, GA, and is chair of the College’s Health Policy Steering Committee Subcommittee on Quality and Patient Safety.*
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References


The April issue of the Journal of the American College of Surgeons will feature:

Original Scientific Articles:

• Predicting Outcomes of Hepatic Transplantation
• Vapreotide and Complications after Pancreatectomy
• Outcomes for Breast Conservation Therapy

Education:

CME and ABS Examination Performance

Palliative Care:

Symposium: Medical Futility and Withdrawal of Care
Incorrect use of modifiers is a widely recognized billing error on Medicare claims. The plethora of guidelines used by various coding rule-makers, such as the Centers for Medicare & Medicaid Services (CMS), the American Medical Association (AMA), and various insurers, increases the complexity of use. Furthermore, coding for bilateral procedures is particularly challenging because it is defined in various ways.

CMS defines a bilateral service as one in which the same procedure is performed on both sides of the body during the same operative session or on the same day.* AMA Current Procedural Terminology (CPT) indicates that “unless otherwise identified in the listing, bilateral procedures that are performed at the same session should be identified by adding modifier 50 to the appropriate five digit code.”† The Healthcare Common Procedure Coding System (HCPCS) uses modifiers LT (left) and RT (right) instead of modifier 50.

In addition, some CPT and HCPCS codes are inherently bilateral by their description, such as CPT code 50300, donor nephrectomy (including cold preservation); from cadaver donor, unilateral or bilateral. Regardless of an individual payor’s approach to coding bilateral procedures, such codes should never be reported with the bilateral modifier 50 or modifiers LT and RT because they are inclusive of the bilateral procedure.

Reporting codes that can be performed bilaterally and are not otherwise identified

Medicare and payors that follow Medicare rules, including United Healthcare, Aetna, Humana, and Cigna, require that the code be billed on one line, the unit be listed as 1, and modifier 50 be appended:

Example:

```
XXXXX-50, Units = 1
```

As discussed previously, the various third-party payors have different coverage guidelines for reporting bilateral procedures. For example, the Blue Cross Blue Shield (BCBS) Association is composed of multiple companies, and many of them have different local coding and coverage guidelines for bilateral procedures. For a list of local BCBS Association companies, go to www.bcbs.com/about-the-companies/; bilateral procedure rules will be listed under “Provider” and “Guidelines and Policies.”

Another variation for reporting bilateral procedures with modifier 50:

The code is billed on two lines, each with 1 unit, and one line has modifier 50:

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†All specific references to CPT (Current Procedural Terminology) codes and descriptions are © 2012 American Medical Association. All rights reserved. CPT and CodeManager are registered trademarks of the American Medical Association.
Example:
XXXXX, Units = 1
XXXXX–50, Units = 1

Reporting codes with bilateral in their intent or with bilateral written in their description
The code is billed on one line, the units are 1, and modifier 50 is inappropriate and should not be appended:

Example:
XXXXX, Units = 1

When to apply modifiers LT and RT
In some instances, procedure codes do not indicate on which side of the body a procedure is performed. In those instances, the modifier LT or RT is used to indicate the side of the body on which a service or procedure is performed. Specifically, modifiers LT and RT should be used to identify procedures that can be performed on contralateral anatomic sites (such as bones, joints), paired organs (such as ears, eyes, nasal passages, kidneys, lungs, ovaries), or extremities (such as arms or legs). Modifiers LT and RT should be used to indicate that the procedure is performed on only one side of the body.

Medicare and other payors that follow Medicare rules as identified in the portion of this article centered on the use of modifier 50 require that the code be billed on one line, the unit be listed as 1, and the RT and the LT modifiers be appended:

Example:
XXXXX–RT, LT, Units = 1

Another variation that may be preferred by payors not listed above is billing the code on two lines, each line with 1 unit and one line with RT and one line with LT modifiers appended:

Example:
XXXXX–RT, Units = 1
XXXXX–LT, Units = 1

When reporting bilateral procedures on a single line (for example, XXXX–50 XXXX RT, LT), the American College of Surgeons (ACS) recommends doubling the fee because payors will reimburse on the lesser of the fee submitted or payor allowable. Additionally, for billing purposes it is important to understand the payor’s rules regarding multiple procedure payment reductions. We suggest watching your reimbursement closely to ensure the insurer pays 100 percent for the first procedure and according to the payor’s multiple procedure payment formula for the second procedure (often 50 percent).

Third-party payors have different policies for reporting bilateral procedures on the claim form. It may be difficult to know how payors expect bilateral procedures to be represented on the claim form. Providers should not wait for denials to identify a payor’s bilateral procedures claim form policy. It is important to verify a payor’s reporting preference to avoid payment denials because some payors may require one- or two-line entry or the use of HCPCS Level II RT and LT modifiers.

In an age of electronic health records, it may be unwise for providers to rely solely on software to accurately apply modifiers by payor preference. As a best practice, run regular payment audits to detect whether bilateral procedures are being paid correctly or denied.

Important steps to take when all services are not performed
If a unilateral procedure has not been defined by CPT or HCPCS guidelines and only a bilateral description of a procedure exists, for example, CPT code 27158, osteotomy, pelvis, bilateral (eg, congenital malformation), report the code per the descriptor and with modifier 52 (reduced services) when the procedure is performed unilaterally. For additional information on HCPCS guidelines, visit www.cms.gov/Medicare/Coding/ MedHCPCSGenInfo/index.html?redirect=/medhcpcsgeninfo/.

When a procedure with “unilateral or bilateral” written in the description is performed unilaterally, then the CPT or HCPCS procedure code need not be reported with modifier 52 since the procedure description
MEDIcare Bilateral payment indicators and rules

CMS has defined certain codes as subject to the bilateral payment rule and has assigned the codes a payment indicator in the Medicare physician fee schedule.

- **0-Indicator**: 150 percent payment adjustment for bilateral procedures does not apply. The bilateral adjustment is inappropriate for codes with this indicator because of physiology or anatomy or because the code descriptor specifically states that it is a unilateral procedure and there is an existing code for the bilateral procedure.

- **1-Indicator**: 150 percent payment adjustment for bilateral procedures applies. If a code is billed with the bilateral modifier (for example, with RT and LT modifiers or one line, one unit, and modifier 50 appended), payment is based on 150 percent of the fee schedule amount for a single code.

- **2-Indicator**: 150 percent payment adjustment for bilateral procedures does not apply. The bilateral adjustment is inappropriate for codes with this indicator because these procedure codes are already bilateral.

- **3-Indicator**: 150 percent payment adjustment for bilateral procedures does not apply. Payment will be based on the lower of 100 percent of the fee schedule for each side or actual charges for each side. Services in this category are generally radiology procedures or other diagnostic tests that are not subject to the special payment rules for other bilateral procedures.

- **9-Indicator**: 150 percent payment adjustment for bilateral procedures does not apply. The bilateral adjustment is inappropriate for codes with this indicator because the concept does not apply.

Clinical scenario

A 68-year-old female undergoes stereotactic needle biopsy of an area of suspicious microcalcifications in the left and right breasts that reveals ductal carcinoma in situ. Review of the mammogram shows the areas biopsied are part of an extensive area of suspicious calcifications extending over a 7-centimeter area along a ductal distribution in each breast. Following review of surgical alternatives with the patient, and considering especially the patient’s breast size relative to the extent of the calcifications, a bilateral mastectomy is planned. How is this scenario reported?

Medicare reporting

- **19303–50, Mastectomy, simple, complete, Units = 1**

- Health Insurance Claim Form 1500 Line 1: Enter CPT code 19303 with modifier 50 (bilateral procedure) in the “Procedures, Services, or Supplies” field (Box 24D). In addition, double the charge in the “Charges” field (Box 24F). Also enter 1 in the “Days or Units” field (Box 24G).

Non-Medicare reporting variation

The code is billed on two lines, each with 1 unit, and one line has modifier 50:

- **19303, Mastectomy, simple, complete, Units = 1**

- **19303–50, Mastectomy, simple, complete, Units = 1**

- Health Insurance Claim Form 1500 Line 1: Enter CPT code 19303 with no modifier in the “Procedures, Services, or Supplies” field (Box 24D). Enter 1 in the “Days or Units” field (Box 24G).

- Health Insurance Claim Form 1500 Line 2: Enter CPT code 19303 with modifier 50 (bilateral procedure) in the “Procedures, Services, or Supplies” field (Box 24D). Also enter 1 in the “Days or Units” field (Box 24G). In this scenario there is no need to double the charge. Bill 100 percent on each line.

If you have additional coding questions, contact the American College of Surgeons Coding Hotline at 800-227-7911 between 7:00 am and 4:00 pm Mountain time, excluding holidays, or go to www.facs.org/ahp/pubs/tips/index.html.

Editor’s note

Accurate coding is the responsibility of the provider. This summary is intended only to serve as a resource to assist in the billing process.
Health care in Canada, for the most part, is under provincial rather than federal jurisdiction. Although the Canada Health Act has flagship criteria and conditions, such as “universality” and “portability,” it rests these definitions on what Canadians perceive as a citizen’s right: Health care access for all. This definition includes access to surgical services. Details of traveling a certain distance to receive this care and the specifics of what that care encompasses at each hospital never made it into the act’s fine print. Access to timely, affordable, and quality surgical care is an ongoing challenge for Canadians and this challenge is magnified in rural communities, which are defined as locations with populations of less than 10,000 and/or fewer than 150 people per kilometer. An estimated 95 percent of the Canadian land mass is considered rural or remote (see Figure 1, page 51). The 20 percent of Canadians who call rural communities home live with the environmental challenges this landscape presents, in addition to the socioeconomic, cultural, and political factors that complicate this situation further. Several factors affect provision of rural surgical services in Canada, including: (1) surgeon training; (2) certification, licensing, privileges, and credentialing; (3) recruitment and retention; (4) rural surgical care delivery models; and (5) recognition of a rural surgery subspecialty within general surgery.

Training general surgeons
To optimize Canadian rural surgery services, training programs must account for certain trends that are increasingly problematic. General surgery residency curriculum has been trending toward subspecialization with subsequent pursuit of postresidency fellowship training categorized by anatomic association (such as hepatobiliary), clinical etiology (such as surgical oncology), a technical approach (such as minimally invasive surgery), or patient demographics (such as pediatric). More than 70 percent of Canadian general surgery residents pursue fellowship training, similar to the 80 percent documented by the American Board of Surgery. Whereas some surgical educators would argue that fellowships tailor skills in a manner paralleling trends in clinical practice and job postings, others maintain that they have created a shift in perception of skills and expertise. Subspecialization will preferentially benefit the 80 percent of Canadians in urban centers where most, if not all, subspecialty-trained surgeons will practice. Career goals of subspecialization may have heightened the demand for fellowships at the expense of undermining training for future rural surgeons with a different set of exit competencies. Indeed, even large urban hospitals demand well-rounded generalist surgeons who apply this particular expertise for the bulwark of surgical emergencies. A pervasive concern is that many general surgery residents no longer obtain the skill set that rural, “generalist” general surgeons require. This situation is illustrated by challenges for residents to acquire particular skill sets. For example, in Canada,
nonsurgeon gastroenterologists perform a large volume of endoscopy in teaching centers, which may limit surgery residents’ access to endoscopy training.\textsuperscript{11} Yet, data from the Canadian Association of General Surgeons (CAGS) shows that the majority of colonoscopies in Canada, especially in rural settings, are completed by general surgeons, necessitating advocacy/position statements to support acquisition of these skills in surgical residency.\textsuperscript{6} Similarly, although the generalist skill set overlaps with other surgical specialties, the Royal College of Physicians and Surgeons of Canada’s (RCPSC) general surgery training requirements are specific to general surgery and its subspecialties.\textsuperscript{12} Residents usually have little to no formal training in other surgical specialties.

While such “off-service,” nongeneral surgery electives may be requested, such flexibility is usually limited to junior residency years when training focuses on core surgical principles rather than procedural competency.\textsuperscript{5} This training occurs years before residents establish clinical practice, limiting transition into their rural surgery career.

Although graduating surgery residents have been deemed competent to perform complex subspecialty procedures within a tertiary care team environment, these skills may not transfer to a case-mix with which they are unfamiliar, an isolating environment with no peer support, or a lifestyle not previously experienced.\textsuperscript{6} Exposure to the spectrum of a rural surgeon’s skill set during training may increase residents’ awareness and likelihood to tackle the unfamiliar path. The RCPSC has recently established a task force known as the Future of General Surgery in the 21st Century to address gaps in generalist surgeon training.

**Certification, licensing, privileges, credentialing**

Although the RCPSC oversees certification of graduates from Canada’s residency programs, licensing is overseen by each individual province’s College of Physicians and Surgeons.\textsuperscript{13,14} Licensing guarantees neither privileges nor clinical positions. Clinical privileges are acquired at a local/regional level, and variations in requirements for licenses and privileges may limit portability of a rural surgeon’s diverse skill set. Given the
A pervasive concern is that many general surgery residents no longer obtain the skill set that rural, “generalist” general surgeons require.

shortage of surgeons willing and able to work in rural—and particularly remote—locations, this jurisdictional barrier can wreak havoc on issues such as locum programs or rural surgeons moving from province to province.

Fellows of the Royal College of Surgeons of Canada (FRCS[C]) may apply for clinical privileges anywhere in Canada and subsequently establish surgical practice where they are needed and resources are available. In contrast, international medical graduates (IMGs) undergo a more complex process.13 Depending on the country in which their training was conducted and previous professional experience, IMGs may practice in Canada by repeating none, part, or all of their surgical training before qualifying to take the Canadian examinations. If they completed training at a FRCS(C)-accredited foreign residency program, they may practice before completing the requisite examinations and other requirements for full provincial license, but such opportunities are almost exclusively in rural, northern, and underserviced communities. Rural Canadians initially benefit from these IMGs, but unfortunately, relatively low retention rates are the typical result, and once these individuals pass their examinations, the rest of Canada opens their doors fully to them.15,16

The scope of rural surgery in Canada has more breadth than depth. While a range of emergent procedures from other specialties is anticipated, the scope of general surgery is at risk. With the subspecialization trend, turf wars diversify as general surgeons with fellowship training expect referral patterns to shift accordingly. If this movement occurs, procedures specific to the generalist general surgeon will shrink further, as has historically been observed with the establishment of other surgical specialties (personal communication with co-author Dr. Warnock and Kenneth A. Harris, MD, FRCS(C), director of education for the RCPSC, May 13th, 2013).

The scope of rural surgery may be further constrained by hospital and operative teams’ lack of capacity to deal with anesthetic or technology demands.10,17 Operative volume of a rural surgeon is already limited by the catchment area they serve, but these additional pressures must be considered given the ongoing volume-outcome debate and credentialing bodies proposing “numbers” of procedures rather than competency outcomes.17 Rural surgeons struggle to validate the services they provide while the push for regionalization attached to this complex volume-outcome debate looms.10 This issue is not simply about hospital and surgeon volume, but training and case-mix of the entire surgical health care team, including anesthesiologists, nurses, and other allied health care professionals.

Recruitment and retention
The number of general surgeons in Canada and the province of British Columbia (BC) (5.0 and 4.0 per 100,000, respectively) is lower than health care experts estimate is necessary to provide adequate services (9.4–9.8/100,000).18,20 Health care facilities in rural Canada struggle more to both recruit and retain specialists. Growing evidence demonstrates that where residents complete their medical education and surgical training and where they were raised strongly predict where they will choose to practice.10,19,21,22

The University of BC’s distributed medical school in northern BC, the Northern Medical Program (NMP), was developed in response to this knowledge gained from medical education research.21 Since its inception in 2004, the program has graduated 160 students, 10 of whom chose general surgery training. One aim of the NMP is to expose trainees to life and medicine in rural and northern communities so as to enhance their interest in these professional environments. The first class of surgical trainees with NMP roots graduated in June 2013, and the potential impact on rural surgical services of these and future NMP graduates is anxiously awaited.

Canadian rural surgical services—which is often associated with northern and/or remote geography—have lifestyle implications, including environmental, social, and
PROGRAMS FOR RECRUITMENT AND RETENTION OF SURGEONS TO BRITISH COLUMBIA’S RURAL COMMUNITIES

<table>
<thead>
<tr>
<th>Program name*</th>
<th>Program description</th>
<th>Funding available†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural Retention Program</td>
<td>An incentive program to enhance the supply and stability of physician services in rural communities</td>
<td>$0–$31,365/position/year</td>
</tr>
<tr>
<td>Rural Continuing Medical Education (RCME)</td>
<td>Provides funding for CME to support the maintenance of skills and credentials required for rural practice</td>
<td>$0–$7,800/year</td>
</tr>
<tr>
<td>Recruitment Incentive Fund</td>
<td>Provides an incentive to physicians recruited to fill vacancies in rural communities</td>
<td>$5,000–$20,000/position</td>
</tr>
<tr>
<td>Recruitment Contingency Fund</td>
<td>Provides financial assistance to rural communities to help with recruitment expenses when filling a vacancy is, or is expected to be, difficult</td>
<td>$0–$15,000/position</td>
</tr>
<tr>
<td>Isolation Allowance Fund</td>
<td>Assists physicians who provide services in eligible rural communities with fewer than four physicians</td>
<td>$8,121–$104,571/community/year</td>
</tr>
<tr>
<td>Northern and Isolation Travel Assistance Outreach Program</td>
<td>Provides compensation to physicians traveling to rural communities to provide services “closer to home”</td>
<td>Travel and lodging expenses reimbursed; Travel time honorarium: $500–$1,500/physician</td>
</tr>
<tr>
<td>Rural Specialist Locum Program</td>
<td>Assists with facilitating locum coverage for rural specialists (regarding CME, vacation time, and so on)</td>
<td>$1,200/day; Travel honorarium (MSP): $1,000</td>
</tr>
<tr>
<td>Rural Education Action Plan (REAP)‡ Undergraduate Rural Participation Program</td>
<td>Assists third- and fourth-year medical students pursuing rural training opportunities</td>
<td>$250/week; $800 for travel</td>
</tr>
<tr>
<td>REAP Undergraduate Teacher’s Stipend</td>
<td>Provides compensation for physicians training medical students in rural communities</td>
<td>$450/week (maximum eight weeks)</td>
</tr>
<tr>
<td>REAP Specialty Training Bursary Program</td>
<td>Assists residents in training intending to practice in rural communities</td>
<td>$25,000/year bursary (maximum two years)</td>
</tr>
</tbody>
</table>

*Funded by British Columbia Provincial Ministry of Health.
†Funds based on degree of isolation, expected difficulty of recruitment, and number of years practicing in a rural community. Specific details are not described.
‡Funded by the British Columbia Ministry of Health and the University of British Columbia.

Cultural, to name a few. Government and university programs attempt to address the chronic issue of recruitment and retention. The table on this page demonstrates a list of programs created over the years for recruitment and retention of specialists in northern BC.24

Rural surgical care delivery models
An intuitive model that addresses mounting concerns regarding the need for rural surgical services is regionalization of resource-intensive subspecialty services, such as pediatric, transplant, and so on, with the vital balance of a supportive network for rural surgeons to maximize the spectrum and volume of care they can provide. This support historically was limited to patient transfer requiring costly land, water, or air transport; delayed care; risks of transport; and the emotional and physical effects on patients that occur when they are transferred away from their community and support systems. A responsive delivery model requires use of innovative resources in telehealth and electronic health records (EHRs).

BC’s Northern Health Authority (NHA) exemplifies rural Canada in its vast geography (600,000 km²) with its population density less than 0.5 persons/km² (see Figure 1) The NHA implemented telehealth for consultations, operative preparation, and follow-up for patients who require a broad spectrum of specialty care available only in regionalized and tertiary care centers. Telehealth ensures patients can receive care closer to home.25 Hospital and clinical care costs in Canada are covered under the public insurance.
plan, but unless the situation is classified as urgent or emergent, travel costs are the patient’s responsibility. The telehealth network decreases travel requirements. Figure 2 on this page demonstrates the evolution of telehealth in BC’s NHA with surgical care in the development stage of use (personal communication and Figure 2 production: Frank Flood, BC NHA regional manager, Telehealth, August 15, 2013). Canada’s remote North West Territories (NWT) also present vast distances across which health professionals must communicate. Physicians there have enhanced on-site and telehealth care via digitized networked EHRs, which house patient databases, laboratory results, decision support vehicles, archived radiologic images, and reports. Now estimated to support most NWT residents, these EHRs and associated telehealth partners permit rapid access to consultative expertise from surgeons in referral centers and facilitate surgical decision making in locations without on-site surgical care. Cost savings are significant because a $10,000 (one-way) MedEvac flight for consultation may be supplanted with a $150 video consultation, often permitting patients to stay safely within their community.

Rural surgical care in Canada is provided by a heterogeneous, passionate group of physicians, including general surgeons and family physicians who perform specific procedures, including, but not limited to, caesarian sections. Historical terminology of “general practice surgeon” (GPS) is morphing into “Family Physician with Enhanced Surgical Skills” (FP-ESS), with a proposed formal curriculum submitted to the Canadian College of Family Practice in September 2012. Novel engagement with CAGS includes plans for a collaborative position paper on FP-ESS, a concept often skirted due to professional politics. With multiple studies on outcomes and quality of care of GPS supporting the limited but important role our FP colleagues provide for rural communities, the general surgery profession is overdue for discussions with these colleagues.

In Canada, if general surgeons do not play an active role in the
Rural surgery demands a unique skill set. This reality must be addressed to ensure surgeons’ skills match their home addresses.

The subspecialty of rural surgery
It might seem odd that “rural” is an accepted adjective for a surgeon but is not accompanied by the kind of fellowship training that characterizes other subspecialties. Rural surgery demands a unique skill set. This reality must be addressed to ensure surgeons’ skills match their home addresses. Core surgical principles are mastered in residency, but the specific skill set is based on the case-mix for which residents train, including the environment in which they gain these skills and who teaches them.

One solution is flexible general surgery residency programs that provide trainees with rotations targeting procedural competencies within the scope of other specialties in their senior residency years rather than limiting them to, or targeting, subspecialty rotations. Another option is to create rural surgery fellowships, which would provide an additional year of training to give surgeons exposure to the skills and lifestyle associated with rural practice. The

REFERENCES


continued on next page
RCPSC is giving consideration to both options, which were discussed at a summit meeting in May 2013. Rotations in rural locations may also increase understanding among future surgeons in tertiary care centers of their rural colleagues’ requests for patient transfer, and of the challenges facing rural, remote, and northern Canada.

Conclusion
General surgery is evolving in Canada. Although the established subspecialty trend is accepted, rural surgical care is acknowledged as a discipline to be optimized and preserved so that Canada’s surgical delivery matches the country’s demographics and geography: Yet another canary in the coal mine of a universal health care system.◆

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REFERENCES (CONTINUED)


Does altering diet affect progression of prostate cancer?
The MEAL study

by J. Kellogg Parsons, MD, MHS, FACS; James R. Marshall, PhD; and Heidi Nelson, MD, FACS

Can modifications in dietary intake affect survival in men with prostate cancer? Despite robust data indicating that dietary constituents may be substantially associated with the natural history of prostate cancer, there remains a paucity of Level I evidence on which to base clinical recommendations.1 Randomized clinical trials of dietary supplements have failed to yield demonstrable benefits. For example, the Selenium and Vitamin E Cancer Prevention Trial (SELECT)—a randomized, placebo-controlled study of more than 34,000 men randomized to once daily vitamin E (400 IU), selenium (200 mcg/day), both, or placebo—showed that neither vitamin E nor selenium had any observable benefit in preventing incident prostate cancer. In fact, the study showed a nonsignificant increased risk of prostate cancer and diabetes for patients taking those amounts of vitamin E (p=0.06) and selenium (p=0.06), respectively.4 Other studies have yielded similar results for selenium, vitamin E, and vitamin C.2,3

A new approach
These disappointing observations have prompted researchers to reassess the prior micronutrient models of prostate cancer therapy and refocus their efforts on developing viable interventions based on broad patterns of dietary practice. Epidemiological studies suggest that altering nutritional intake—specifically, switching to a diet that emphasizes vegetable intake and de-emphasizes meat and fat intake—may inhibit prostate cancer initiation and clinical progression.4-6 Experimental studies in prostate cell line and animal models demonstrate that components of cruciferous vegetables (such as kale, broccoli, and turnips) and carotenoids (such as tomatoes and carrots) induce apoptosis of prostate cancer cells, inhibit carcinogenesis, and promote the expression of cytoprotective enzymes in prostate tissue.7-9 Clinical evidence supporting these observational and preclinical data, however, is limited. Three small studies have evaluated diet change as a therapy for prostate cancer, one of which suggested a beneficial effect for a vegetable-intense diet in a small number of patients with low-stage, low-grade disease.10-12 However, whereas this intensive lifestyle intervention also included dietary supplements, exercise, stress management, and support group participation, more definitive studies, testing feasible yet robust diet-based interventions capable of being implemented and sustained on a larger scale, are needed.11

Active surveillance for prostate cancer and dietary interventions
Nearly 50 percent of newly diagnosed prostate cancer patients in the U.S. present with localized, early stage, relatively indolent disease.13 A substantial proportion of these patients receive unnecessarily aggressive treatment with surgery, radiation, or hormone-based treatments.13,14 These therapies produce considerable urinary, bowel, and sexual morbidities, and their impact on prostate cancer-specific or overall mortality in patients with less aggressive cancers is not clear.15-17

Active surveillance, which entails careful monitoring of selected patients with early stage prostate cancer, may provide a viable and safe alternative to more aggressive treatments.18,19 Approximately 35 percent of patients on active surveillance will progress within five years, while many others will opt for intervention even though they...
MEAL FLOWCHART

REFERENCES
2. Silberstein JL, Parsons JK. Prostate cancer prevention: Concepts and 
   Lippman SM, Parnes HL, Alberts SB, Jarrard DF, Lee WR, Gaziano 
   JM, Crawford ED, Ely B, Ray M, Davis W, Minasian LM, Thompson 
   IM Jr. Phase III trial of selenium to prevent prostate cancer in men with 
   high-grade prostatic intraepithelial neoplasia: SWOG S9917. Cancer Prev 
4. Sonn GA, Aronson W, Litwin MS. Impact of diet on prostate cancer: A 
5. Stevens VL, Rodriguez C, Pavluck AL, McCullough ML, Thun MJ, Calle 
   EE. Folate nutrition and prostate cancer incidence in a large cohort of 
6. Richman EL, Carroll PR, Chan JM. Vegetable and fruit intake after 
   diagnosis and risk of prostate cancer progression. Int J Cancer. 
   FL, Morris JD, Muir GH. Lycopene inhibits DNA synthesis in primary 
   prostate epithelial cells in vitro and its administration is associated 
   with a reduced prostate-specific antigen velocity in a phase II clinical 

CALGB 70807: The Men’s Eating and Living (MEAL) Study
The MEAL Study is a randomized clinical trial testing the effect of a high-vegetable 
   diet on disease progression in prostate cancer patients on active surveillance (see figure, 
   this page, and table, page 59). It is the first national trial of a nonsupplement dietary 
   intervention for prostate cancer and one of the first major studies 
   of an intervention targeted for active surveillance patients. 
   A total of 464 patients will be enrolled and monitored, each 
   for up to two years. MEAL uses the same telephone- 
   based counseling intervention validated in the pilot study. 
   Patients will be randomized to a telephone counseling program 
   to assist with their dietary change (Group A) or to receive 
   printed materials based on U.S. Department of Agriculture 
   recommendations (Group B). The target daily intake for 
   Group A is: seven servings of vegetables (three cruciferous, 
   two tomatoes/tomato products, two other vegetables); two 
   servings of whole grains; two servings of fruit; and one serving 
   of beans or other legumes.

   The primary goal of MEAL will be to measure disease 
   progression defined by total 
   prostate-specific antigen 
   (PSA), PSA doubling time, and 
   pathology on repeat prostate 
   biopsy. Secondary measures 
   will include treatment 
   seeking, patient anxiety, 
   health-related quality of life, 
   and tissue biomarkers.

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Therapeutic dietary modification would potentially promulgate a novel paradigm for lower-risk prostate cancer akin to diet alterations for non–insulin-dependent diabetes: medical management, without curative intent, of a chronic disease state. There is widespread interest in diet as a possible factor in disease risk and progression. The limited data available suggest that a diet emphasizing plant products and de-emphasizing animal products protects against carcinogenesis and cancer progression. Experimental consideration confirming or refuting the impact of diet, however, is needed. The MEAL study, which will follow prostate cancer patients under expectant management, will provide important data on the actual, short-term impact of the adoption of a diet that increases vegetable intake and limits meat and dairy intake. 

REFERENCES (CONTINUED)


SELECTED INCLUSION CRITERIA FOR CALGB 70807

- Biopsy-proven adenocarcinoma of the prostate, clinical stage ≤ T2a diagnosed within 24 months
- ≤ 25% of biopsy tissue cores positive for cancer
- ≤ 50% of any one biopsy tissue core positive for cancer
- PSA <10 ng/mL
- Aged 50 to 80 years
- For men ≤ 70 years, biopsy Gleason score must be ≤ 6; for men > 70 years, biopsy Gleason score must be ≤ (3 + 4) = 7
- Patients who have had prior treatment for prostate cancer by surgery, irradiation, local ablative, or androgen deprivation therapy are not eligible
Finding new solutions to hand hygiene problems

Hand hygiene is an important issue for improved surgical patient outcomes in that it helps prevent the risk of infection. Nonetheless, compliance with hand hygiene requirements is still a significant problem.

Nearly 2 million health care-associated infections (HAIs) are reported every year, and one in every 20 inpatients will contract an HAI. These infections lead to 99,000 deaths annually and to an estimated $28 to $34 billion in additional direct medical costs. HAIs are a significant public health issue, and their prevention should be at the forefront of patient safety efforts.1-4

A national challenge
Improving hand washing among health care professionals is one of the most effective ways to prevent HAIs, yet national compliance with recommended hand hygiene guidelines is approximately 40 percent to 50 percent.7 To sustain improvement and make a difference, a simple slogan or campaign is not enough, and demanding that health care workers try harder probably is not the answer either. Comprehensive, systematic, and sustainable change is the only solution.

In a recent hand hygiene project led by the Joint Commission Center for Transforming Healthcare, eight U.S. hospitals and health systems that volunteered to measure their hand hygiene rates were surprised to find that, when using a consistent and reliable measurement system, their rate of hand hygiene compliance averaged 48 percent. To address the endemic challenge of hand washing compliance, the Joint Commission Center for Transforming Healthcare developed a tool, which has demonstrated 40 percent improvement in compliance by systematically addressing the entire improvement process. The tool leads health care organizations to solutions that have proven effective in mitigating organization-specific barriers to hand hygiene, leading to higher compliance and lower HAI rates. The tool is available free of charge to the 20,000 health care organizations in the U.S. that The Joint Commission has accredited. For a typical 200-bed hospital, implementing the Targeted Solutions Tool (TST) can annually prevent 130 to 140 HAIs and eight deaths and save $2.3 to $2.8 million in direct medical costs.

The physician champion
Persistent safety issues such as hand hygiene compliance are complex and multifactorial. The TST is a secure, password-protected, Web-based application that allows hand hygiene teams to break down the complex problem of guideline compliance and focus on the specific factors that affect an organization’s performance. This targeted approach allows for customization and sustainability.
HAIs are a significant public health issue, and their prevention should be at the forefront of patient safety efforts.

of the solutions implemented, acknowledging that complex problems cannot be addressed using a one-size-fits-all solution.

A TST hand hygiene project team should include a strong physician champion and a project leader to facilitate meetings and help gain buy-in from stakeholders. Project teams can be expected to spend up to four hours a week collecting and entering compliance data, attending team meetings, and implementing solutions during the 12 weeks of the project. Team members can expect to spend four hours each month sustaining the gains achieved through the hand hygiene improvement strategies.

**TST hand hygiene solutions**
The center’s hand hygiene solutions were developed using Lean Six Sigma and change management tools and methods that had proven effective in a variety of settings. The TST was designed to be self-directed and includes the use of video tutorials, training materials, implementation guides, change management tips, and data collection tools.

The TST hand hygiene solutions address:

- Measuring the specific, high-impact causes of hand hygiene failures in a facility
- Targeting solutions to those specific causes
- Using resources effectively and efficiently to improve compliance
- Making washing hands a habit as automatic as looking both ways when crossing the street or fastening a seat belt before driving a car
- Serving as a role model by practicing proper hand hygiene
- Holding everyone accountable and responsible—physicians, nurses, food service staff, housekeepers, chaplains, technicians, and therapists
- Saving lives through the reduction of HAIs

The TST directly addresses issues of hand hygiene compliance. For information on hand washing methods, visit the Centers for Disease Control website at [www.cdc.gov/hai/organisms/cdiff/cdiff_faqshcp.html#a10](http://www.cdc.gov/hai/organisms/cdiff/cdiff_faqshcp.html#a10).

For more information about the TST and hand hygiene, visit the Joint Commission Center for Transforming Healthcare at [www.centerfortransforminghealthcare.org](http://www.centerfortransforminghealthcare.org) or e-mail TST_Support@jointcommission.org.

**REFERENCES**

Most of us probably remember the nursery rhyme “London Bridge Is Falling Down” from our childhoods. Many of us probably sang it or played the game. However, we probably did not know the origins of the rhyme. Many theories exist to explain the origin of this 18th century rhyme. The first London Bridge spanned the River Thames in the middle of the first century. The Romans constructed it of wood and mud at Londinium, now known as London. The London Bridge referenced in the song was commissioned by Henry II in the later part of the 12th century and took more than 30 years to complete. According to art historian Dan Cruickshank, once the bridge was built, it needed to be maintained. To cover the maintenance costs, tolls were placed on people and ships using the bridge and waterway. However, sometimes the money went astray. In the late 1200s, Henry III gave some of the revenue to his wife Queen Eleanor (referred to as “My Fair Lady” in the rhyme), which she spent on herself. Five years later, five of the 19 bridge’s arches came “falling down.”

America’s aging bridges
According to the The Fix We’re In For: The State of Our Nation’s Bridges 2013, the U.S. has more than 600,000 bridges, with an average age of 43 years. Of these bridges, 66,405 (11 percent) are structurally deficient and require significant maintenance, rehabilitation, or replacement. Approximately 260 million trips are made over deficient bridges across the U.S. each day. Most bridges are designed and constructed to last 50 years before a major overhaul or replacement. These structurally deficient bridges have an average life of 65 years. In just 10 years, one in four bridges (170,000) will be more than 65 years old. Earlier this year, the Interstate 5 Bridge collapsed into the Skagit River in Mount Vernon, WA. An overly tall tractor-trailer carrying a legal load for the interstate clipped an overhead support while crossing, and the bridge collapsed. Although this bridge was structurally sufficient, its design was noted to be fracture-critical—lacking redundant supporting elements—a design that was common in bridges before the interstate highway system was developed.

Bridge collapse injuries
To examine the occurrence of bridge collapse injuries in the National Trauma Data Bank®

The NTDB Annual Report 2012 is available on the ACS website as a PDF file and as a PowerPoint presentation at www.ntdb.org. In addition, information regarding how to obtain NTDB data for more detailed study is available on the website.
(NTDB®) research dataset for 2012, admissions medical records were searched using the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM). Specifically searched was external cause of injury code (E-code) E882, fall from or out of a building or other structure (balcony, bridge, building, flagpole, tower, turret, viaduct, wall, window, fall through roof). Those injured due to bridge collapse would be included in this larger group of records. The search uncovered 10,197 records, of which 8,937 contained a discharge status, including 7,080 patients discharged to home, 991 to acute care/rehab, and 652 to skilled nursing facilities; 214 died. These patients were 83 percent male, on average 37.7 years of age, had an average hospital length of stay of 5.9 days, an intensive care unit (ICU) length of stay of 5.4 days, an average injury severity score of 12, and were on the ventilator for an average of 6.7 days. Twenty-one percent went directly to the operating room while another 37 percent went directly to the ICU from the emergency department (see figure, this page).

**Rehabilitation needed**
As the infrastructure of America ages along with its population, we cannot put off to the future the funding and rehabilitation of our bridges. We cannot wait to cross that bridge when we come to it. Millions of people travel each day on bridges that may be structurally unsound. Let us learn from Henry III’s mistake regarding appropriations. After all, there is at least one London Bridge in America.

Throughout the year, we will be highlighting data through brief reports in the Bulletin. The NTDB Annual Report 2012 is available on the ACS website as a PDF file and as a PowerPoint presentation at www.ntdb.org. In addition, information regarding how to obtain NTDB data for more detailed study is available on the website. If you are interested in submitting your trauma center’s data, contact Melanie L. Neal, Manager, NTDB, at mneal@facs.org. ♦

**Acknowledgement**
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To the outside observer, the process of carrying out a well-orchestrated operation, no matter how complex, can appear routine almost to the point of boredom. Well-trained members of the team do their jobs, and, with the possible exception of a few moments that are more tense or difficult than others, things go smoothly.

When a crisis erupts, a different set of procedures comes into play. Well-prepared teams usually deal with surgical crises in the operating room (OR) just as effectively. Nevertheless, such teams may be unavailable under certain circumstances, and even the best teams may not be well-drilled in how to handle every crisis.

To ensure that surgical teams are capable of effectively responding to emergency situations, the American College of Surgeons (ACS), through its membership on the Council on Surgical and Perioperative Safety (CSPS), is participating in a campaign to introduce and implement crisis checklists in the OR and perioperative arena.

**The value of checklists**
The use of checklists has migrated from the flight line to the OR, but the surgical profession has only begun to appreciate the potential benefits and applications of this instrument. The purpose of checklists in the OR is to ensure that critical steps in preparing for and performing operations are taken and not left to memory. Situations most vulnerable to oversight are those that are or are perceived to be routine and those that arise during crises. Checklists provide a parachute.

Simulation laboratories have proliferated as a means of improving surgical training and as a way of testing and improving processes in the OR. A number of simulation trials have tested the applicability and utility of crisis checklists. Clinicians who used them in simulated crises expressed a strong desire to have crisis checklists available, not just for training, but in the clinical setting (see related article, page 24). Initial implementation projects have been initiated at the Brigham and Women’s Hospital, Boston, MA; Stanford University, CA; and Cooper University Health System based in Camden, NJ. The concept is hardly new. Educational programs, such as the ACS Advanced Trauma Life Support® and Advanced Cardiac Life Support programs and the military Combat Casualty Care Course, have used checklists as an instructional expedient for many years.

**The CSPS campaign**
The CSPS, which the ACS was instrumental in establishing, has partnered with Ariadne Labs at the Harvard School of Public Health to launch and support a coordinated campaign to stimulate the availability and the implementation of crisis checklists. The CSPS is a unique collaborative of seven organizations representing health care professionals who are involved in perioperative care: the ACS, the American Association of Nurse Anesthetists, the American Association of Surgical Physician Assistants, the Association of PeriOperative Registered Nurses, the American Society of Anesthesiologists, the American Society of PeriAnesthesia
To ensure that surgical teams are capable of effectively responding to emergency situations, the ACS, through its membership on the CSPS, is participating in a campaign to introduce and implement crisis checklists in the OR and perioperative arena.

Nurses, and the Association of Surgical Technologists. The combined membership exceeds 250,000, and the total number of individuals in the seven professions exceeds 2 million.

The CSPS intends to launch a campaign to inform its membership and the surgical community at large of the importance and effectiveness of crisis checklists and of strategies for introducing them into practice. Early experience points to the critical role of a local champion and a multidisciplinary implementation team dedicated to promoting checklist customization and adoption. Ideally, training in the use of crisis checklists would take place in a simulated OR environment, with or without a formal simulation laboratory. Multidisciplinary staff involvement is an essential component, and so is recognition of local resources, needs, and circumstances.

The CSPS plans to expose all members of the perioperative team to the concept of crisis checklists through advocacy and education on a national level. The idea is to create a framework to implement a multidisciplinary, multi-institutional collaboration. A coordinated message from the seven organizations that comprise the CSPS will support efforts both nationally and locally.

The surgical community has the opportunity to lead in the development, adoption, and implementation of crisis checklists in collaboration with other professionals in the OR and perioperative area. Checklists offer additional ways to improve patient care and surgical outcomes using a familiar tool. More information will be made available over the next few months.


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More than 1,000 individuals who work in hospital quality improvement programs participated in the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP®) 2013 National Conference, July 13–16, at the Bayfront Hilton San Diego, CA. This record-breaking number of attendees participated in a variety of sessions aimed at reducing surgical complications, applying quality improvement concepts to difficult surgical problems, and maximizing efficiency and resource use in health care. Many sessions also offered strategies for adapting to a changing health care environment and using evidence-based tools and case studies to improve hospital culture.

Clifford Y. Ko, MD, MSHS, FACS, Director of the ACS Division of Research and Optimal Patient Care and ACS NSQIP, told surgeon champions (SCs), surgical clinical reviewers (SCRs), and other conference attendees that ACS NSQIP, built on a foundation of strong data, is the first nationally validated, risk-adjusted program to provide external benchmarks for measuring the quality of surgical care.

In his welcoming remarks, Dr. Ko spoke of the changing definition of surgical professionalism. “There has been a shift in our definition of professionalism. We have moved from autonomy to collaboration,” he said. ACS NSQIP has taken what program participants have learned from their experiences and applied those lessons to generate optimal quality surgical standards, Dr. Ko explained. He went on to present a vision of the surgeon of the future who will be part of a high-performance team that will depend on evidence-based measurements. The College’s recently published book, Lessons Learned in the Pursuit of Quality Surgical Health Care, Dr. Ko added, reflects the commitment of ACS NSQIP participants, whose evidence-based practice gave
In his welcoming remarks, Dr. Ko spoke of the changing definition of surgical professionalism. “There has been a shift in our definition of professionalism. We have moved from autonomy to collaboration,” he said.

ACS emphasis on quality
During the opening session, ACS President A. Brent Eastman, MD, FACS, whose leadership of the College coincides with the organization’s 100-year anniversary and who has chosen “The Next 100 Years” as the theme of his presidential term, borrowed the words of former U.K. Prime Minister Winston Churchill, noting, “The further back you look, the further forward you can see.”

“The College started on a mission of quality,” Dr. Eastman said. “Care in hospitals in the early 1900s was hit or miss, and it was the ACS leaders who wanted to standardize care.” He spoke of the cycle of quality health care—that the best evidence-based practices produce high-quality surgical care, which produces better outcomes.

“The one word that surgeons agree on is ‘unsustainability’ of the current health care system,” he added. “I believe that ACS NSQIP is the best answer to the situation we face today.”

ACS Executive Director David B. Hoyt, MD, FACS, in his address to the conference attendees during the opening session, pointed to three principles that will drive health care in the future: access to care, payment reform, and delivery system redesign. “The whole idea of quality and professionalism in health care is changing in this age of accountability,” he said. “Cost and payment are the issues getting air time today.”

Surgeons may not be the drivers of reform, but they are a necessary part of the conversation, Dr. Hoyt said. He noted that at the ACS Inspiring Quality Forum in Boston, MA, on June 4, 2012, economist Stuart Altman, PhD, observed that surgeons and other physicians may not always be on the same page when it comes to health care reform, but they “are American health care” and are the right people to address issues of cost and quality of care.

“The question becomes ‘who will hold the risk?’” Dr. Hoyt said. “The priorities in surgical care today are the science of measurement, quality in surgical health, high-quality data, collaboration, and leadership—not only in the OR but on Capitol Hill.

“Quality is the future of health care,” Dr. Hoyt added. “Quality is measurable, and high-quality data are essential.”

Keynote address on promoting a safety culture
Gerald B. Hickson, MD, delivered the keynote address titled The Influence of Culture on Surgical Quality Improvement—Balancing Systems and Human Accountability in Pursuit of a Culture of Safety, and focused on professionalism.

“There is no high reliability of health systems until we know what it means to be professional. We’re not going to do that unless we have leadership, and each of us at some point becomes the leader,” said Dr. Hickson, senior vice-president for quality, safety, and risk prevention; assistant vice-chancellor for health affairs; and the Joseph C. Ross Chair of Medical Education and Administration, Vanderbilt University School of Medicine, Nashville, TN.

“That’s what happens in a safety culture,” he continued. “Whenever there is a disturbance, people must speak up. Real professionals commit to behavioral models and ask the questions: ‘How does my performance affect the people around me?’ and ‘What behavior undermines safety?’

“At the end of the day,” he added, “safety is about team performance. Bullying is a problem, but passive-aggressive behavior is most destructive. Failure to follow up is not professional. Policies will not work if bad behaviors are not reported.”

To be professional, he added, is to be accountable. “We are not asking people to be perfect. Real professionals pursue accountability. Surgeons...
and the nursing staff must work together for quality.”

ACS NSQIP improves patient care

Many conference speakers echoed Dr. Hickson’s emphasis on building a culture of safety and using ACS NSQIP as the foundation for improving patient safety and quality of care.

At a session on safety, John R. Clarke, MD, FACS, professor of surgery at Drexel University, Philadelphia, and clinical director of the Pennsylvania Patient Safety Authority, said a “never event,” such as a fire in the operating room (OR), occurs rarely but is preventable. Dr. Clark went on to say that the most frequent cause of OR fires is use of electrosurgical equipment while supplemental oxygen is present. Fires must always be reported, Dr. Clarke said, and the hospital must change its practices to avoid recurrences.

To avert other types of never events, The Joint Commission developed a Universal Protocol for Preventing Wrong Site, Wrong Procedure, Wrong Person Surgery several years ago. Linda Groah, RN, MSN, chief executive officer, Association of periOperative Registered Nurses, Denver, CO, explained that The Joint Commission’s Universal Protocol calls for OR teams to apply three steps before an operation begins: verify the relevant information about the case, mark the operative site, and take a “time out.”

Greater use of guidelines will help prevent surgical never events, which still occur with some frequency, according to a 2012 research project led by Martin A. Makary, MD, MPH, FACS, an associate professor of surgery at Johns Hopkins University School of Medicine, Baltimore, MD. The research indicates that more than 80,000 such incidents occurred between 1990 and 2010. In other words, major errors occur approximately 80 times per week and about 4,082 times per year. In the last 20 years, these incidents have resulted in medical liability payouts of more than $1.3 billion, with the payout for each event averaging $133,055.1

Champions of quality improvement

Several ACS NSQIP SCs shared best practices and lessons learned from their hospitals. Among the speakers who discussed the power of ACS NSQIP to improve surgical quality was John M. Morton, MD, FACS, quality improvement administrator, director of surgical quality, and chief of minimally invasive surgery at Stanford University Medical Center, CA. Dr. Morton said the hospital’s application of ACS NSQIP helped moved the institution’s risk-adjusted mortality ranking from average to exemplary.

In the same session, Scott J. Ellner, DO, MPH, FACS, vice-chairman of surgery and director of surgical quality at Saint Francis Hospital and Medical Center, Hartford, CT, reported that benchmark data from ACS NSQIP played a major role in the reduction of the number of urinary tract infections, saving the hospital approximately $53,000 per patient.

“It’s important to share data and recognize and address barriers,” Dr. Ellner said. “Quality improvement is about a shared vision and leadership, which is not about power.”

Joseph B. Cofer, MD, FACS, a general surgeon and program director of the department of surgery, University of Tennessee College of Medicine, Chattanooga, TN, presented highlights of the Tennessee Surgical Quality Collaborative (TSQC), the first ACS NSQIP collaborative that is a partnership between a hospital association, health plan, and ACS local chapter. TSQC has provided proven improvement in the health of Tennessee residents, Dr. Cofer said, but
it takes an effective team for this to happen. “A culture of mutual trust is imperative.”

“The way we do things around here”
Elizabeth C. Wick, MD, FACS, a colorectal surgeon at Johns Hopkins, described the hospital’s Comprehensive Unit-based Safety Program (CUSP), a perioperative quality improvement program that was the outgrowth of an ACS NSQIP patient safety session. To uncover ways to reduce surgical site infections (SSI), members of the Johns Hopkins team completed an anonymous two-question survey that asked how a colorectal SSI developed, and how it could be prevented the next time. The team then developed 95 areas of concern and met monthly, using checklists and monitoring their own progress. The SSI rate for colorectal surgeries dropped 33 percent in the first 12 months of CUSP’s implementation.

Dr. Wick noted that CUSP requires an interdisciplinary team, including executive involvement, which seeks to change the culture in pursuit of patient safety. She acknowledged that in most hospitals, culture is defined as “the way we do things around here,” a mentality that impedes quality improvement. She urged the audience to approach team-building from the bottom up and not, as is most common, from the top down, and to engage all team members in patient safety. “Guide the process so that everybody on the team comes to the conclusion by themselves that a cultural change is needed,” Dr. Wick said. “This requires communication at every level, disseminating information, setting forth expectations, and holding everyone accountable to the same standards.”

According to Charles L. Bosk, PhD, a medical sociologist at the University of Pennsylvania, Philadelphia, CUSP encourages change at the local level and “creates a culture of high reliability through distributed responsibility. The beauty of CUSP is that it calls forth our better angels,” he added. “The work is never done, the team never stops talking, the staff find value in their work, there is a respect for knowledge, and work becomes a calling.”

Reducing complications
At a session on the Top 10 List for Reducing Surgical Complications, John F. Sweeney, MD, FACS, the W. Dean Warren Distinguished Professor of Surgery and chief, division of general and gastrointestinal surgery, department of surgery, Emory University School of Medicine, Atlanta, GA, spoke about readmissions, calling them “a vital performance metric.” Readmissions are expensive, he said. They consume associated opportunity cost—as the readmitted patient takes up a bed—and they have a major adverse effect on the patient.

Most general surgery patients who return to the hospital within 30 days of discharge are readmitted due to postoperative complications, Dr. Sweeney said. Decreasing complications improves the quality of care and benefits the patient, the hospital, and the payor. ACS NSQIP data allow participating hospitals to review clinical patient data, compare themselves with other hospitals, learn the reasons for the readmissions, and determine whether the readmission was planned or unplanned, he added.

“The estimated cost to Medicare for rehospitalization is more than $17.4 billion a year,” Dr. Sweeney said, “a number that has caught the attention of Capitol Hill.” The Centers for Medicare & Medicaid Services (CMS), in October 2012, began to penalize hospitals with high readmission rates.

Pascal R. Fuchshuber, MD, PhD, FACS, The Permanente Medical Group, Inc. and the Permanente Medical Group’s lead ACS NSQIP Surgeon Champion for 21 Northern California Kaiser Medical Centers, noted that complications are a major...
factor in postoperative respiratory failure and mortality. Using ACS NSQIP data of surgical outcomes, Kaiser collaborative participants identified a number of problems related to system failures and not to the individual performance of a surgeon, nurse, or respiratory therapist, he said. The lack of efficient communication between the treatment team and the respiratory therapy team and the relative absence of respiratory care during postoperative recovery of patients because of staffing issues were discussed and presented to the individual department and the hospital leadership.

Abstract sessions share 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. This year, participating sites received a record 125 abstracts, with topics ranging from pediatric-specific quality improvement, to reducing SSI and readmissions and team building. Authors presented their winning abstracts during 24 sessions held throughout the conference. The authors also displayed posters of their abstract topics and were available to answer questions about their work.

Awards honored the authors in four abstract categories:
• Resident Abstract Winner: Michael Cassidy, MD, Boston University Medical Center, MA, Challenges of Sustaining Momentum in Quality Improvement—Lessons from a Multidisciplinary Postoperative Pulmonary Care Program
• Clinical Abstract Winner: Cynthia G. Segal, MSN, PhD, MD Anderson Cancer Center, University of Texas, Houston, Risk Factors Differ by Type of Surgical Site Infection
• SCR Abstract Winner: Peggy K. Jeanneault, RN, MAOM, Kaiser Foundation Hospitals, Fresno, CA, Team—Together Everyone Achieves More—The Story of the Kaiser Northern California ACS NSQIP Collaborative
• Abstract Poster Winner: Dan W. Gates, Vanderbilt University, Nashville, TN, Is Pediatric ACS NSQIP Review Representative of Total Institutional Experience for Children with Appendicitis

Access to experts to help improve patient care at the local level
Through many educational and networking events, the ACS NSQIP National Conference provided attendees with opportunities to meet with and learn from experts in their field. Special pre-conference workshops allowed attendees to learn firsthand from leaders in surgical quality improvement.

Nestor F. Esnaola, MD, MPH, MBA, FACS, Co-Principal Investigator, National Center on Minority Health and Health Disparities/National Institutes of Health, Washington, DC; and chief, division of surgical oncology; and vice-chair, clinical and academic affairs, Temple University School of Medicine/Fox Chase Center, Philadelphia, PA, led a pre-conference session on a pathway to improvement that incorporates Lean Six Sigma. Lean Six Sigma is a managerial process that helps identify sources of waste and activities that do not add value in the pursuit of maximum productivity.1

Attendees learned how to combine Lean Six knowledge with ACS NSQIP reports and resources to generate successful quality improvement projects and successful change management. “Communicate your strategy for change,” Dr. Esnaola said. “Be concrete in your communication, but don’t attempt to tackle everything. There must be a shared ownership of a change initiative.”

In another pre-conference session, Joe H. Patton, MD, FACS, associate chief medical officer and chief of surgical services at

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“Communicate your strategy for change,” Dr. Esnaola said. “Be concrete in your communication, but don’t attempt to tackle everything. There must be a shared ownership of a change initiative.”

Henry Ford Hospital, Detroit, MI, and Jennifer Ritz, RN, BSN, Manager of Quality Improvement at Henry Ford Hospital, focused on teamwork and improving culture to engage leadership and surgeons in the quality improvement process. The limited number of attendees in the pre-conference workshops allowed for a collaborative environment focused on sharing and learning from fellow attendees.

New to this year’s conference were “Ask the Expert” sessions, which allowed attendees to meet in small groups with surgical leaders from around the country to discuss areas of interest. Ask the Expert sessions emphasized the sharing of ideas and involved individuals with expertise in a variety of surgical fields, government regulation, culture and safety, and team building.

**New tools to improve care**

At the conference, ACS NSQIP introduced two new quality improvement tools to help attendees with their local quality improvement efforts, including the ACS NSQIP Surgical Risk Calculator. This instrument uses information from more than 400 hospitals and 1.4 million ACS NSQIP patient records to provide accurate, patient-specific risk information to guide both surgical decision making and informed consent. The risk calculator provides predictions for 10 outcomes, including mortality, any morbidity, serious morbidity, pneumonia, cardiac complications, SSI, urinary tract infection, venous thromboembolism, renal failure, and length of stay. The Surgeon Adjustment Score that the Risk Calculator generates allows surgeons to adjust the predicted risks if a patient has significant risk factors not already included in the instrument-provided variables. The risk calculator is available for use at [http://riskcalculator.facs.org/](http://riskcalculator.facs.org/). (See corresponding article, page 72, for more details.)

Attendees also learned that they will receive Interim Semiannual Reports (ISAR) starting in October. Previously, ACS NSQIP hospitals received their risk-adjusted outcomes on a semiannual basis only. The ISAR, in addition to real-time risk-adjusted reports for measures endorsed by the National Quality Forum, will enable hospitals to monitor quality efforts and act on the results more quickly.

**Evidence-based measurements improve quality**

Hospitals that participate in ACS NSQIP have the opportunity to avoid complications and enhance performance by using evidence-based measurements, assessing outcomes, and learning from past experiences—a lesson that was repeated throughout the conference. Maher A. Abbas, MD, FACS, FASCRS, chair of the Center for Minimally Invasive Surgery at Kaiser Permanente, Los Angeles, director of the Permanente National Center of Excellence for Colon and Rectal Surgery, and associate professor of surgery, University of California, invoked the memory of a historical event—the sinking of the RMS Titanic in 1912, a catastrophe that resulted in the death of 1,502 passengers and crew. “The outcome was very different than expected,” Dr. Abbas said, but there were warnings that should have been heeded. The ship was equipped with the minimum number of required lifeboats and the ship’s captain had been advised of icebergs in the area, he said. As with surgical deaths, he said, the Titanic deaths were preventable. The captain of the Titanic went down with the ship, a fate that fortunately does not await surgeons who participate in ACS NSQIP. “The beauty of ACS NSQIP is that you can compare results to national standards and propose intervention,” Dr. Abbas concluded.
New ACS NSQIP® Surgical Risk Calculator offers personalized estimates of surgical complications

The new American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP®) Surgical Risk Calculator is a revolutionary tool that quickly and easily estimates patient-specific postoperative complication risks for most operations, according to research findings posted online in the Journal of the American College of Surgeons (JACS), at http://www.journalacs.org/article/S1072-7515(13)00894-6/pdf. The study will appear in a print edition of JACS later this year.

Surgeons and patients have long sought an accurate decision-support tool to estimate patients’ risks of complications after surgical procedures. This process is essential for patient-centered care, shared decision making with patients, and true informed consent. Furthermore, the Centers for Medicare & Medicaid Services—through the Physician Quality Reporting System (PQRS)—may soon provide a financial incentive for surgeons to calculate the risks of operations using the Surgical Risk Calculator and to discuss these patient-specific risks with patients before performing elective procedures in the U.S.

“Predicting postoperative risks, and identifying patients at a higher risk of complications, have traditionally been based on anecdotal experience of the individual surgeon or small studies from other institutions. Importantly, these risk estimates have been generic and not specific to an individual patient’s risk factors. To have truly informed consent and shared decision making with a patient, we need the ability to provide customized, personal risk estimates for patients undergoing any operation,” according to Karl Bilimoria, MD, FACS, ACS Faculty Scholar, director of the Surgical Outcomes and Quality Improvement Center at Northwestern University, Chicago, IL, and lead author of the study.

For the study, Dr. Bilimoria and colleagues used highly detailed and accurate ACS NSQIP data collected from nearly 400 hospitals and 1.4 million patients to develop a universal surgical risk calculator that covers more than 1,500 unique surgical procedures across multiple specialties. The authors leveraged outcomes data collected by ACS NSQIP to create the Surgical Risk Calculator.

“The quality and rigor of the ACS NSQIP clinical outcomes data were critical to the development and reliability of the Surgical Risk Calculator,” explained study coauthor Clifford Y. Ko, MD, MSHS, FACS, Director of the ACS Division of Research and Optimal Patient Care.

The Surgical Risk Calculator allows surgeons to enter a total of 22 preoperative patient risk factors about their patients. Next, the risk calculator estimates the potential risks of mortality and eight important postoperative complications and displays these risks in comparison to “an average patient’s risks.” The authors worked to ensure that the information would be presented in a patient-friendly way, accommodating a broad range of health literacy needs.

The authors also performed rigorous tests to ensure the validity of the risk estimates provided by the Surgical Risk Calculator. The investigators reported that the ACS NSQIP Surgical Risk Calculator yielded excellent prediction results for death, overall complication and serious complication rates, and six additional postoperative complications: pneumonia, heart problem, surgical site infection, urinary tract infection, blood clot, and kidney failure. In addition, the Surgical Risk Calculator estimates a customized length of hospital stay for the patient.

However, other hard-to-measure factors may increase a patient’s risk of postoperative complications, so the Web-based risk calculator includes an important novel feature: a Surgeon Adjustment Score that allows surgeons to increase the risk of an operation based on their subjective assessment of a patient.
“The quality and rigor of the ACS NSQIP clinical outcomes data were critical to the development and reliability of the Surgical Risk Calculator,” explained study coauthor Clifford Y. Ko, MD, MSHS, FACS, Director of the ACS Division of Research and Optimal Patient Care.

This feature enables surgeons to better counsel patients using the modeled estimate along with the surgeon’s experience and evaluation of the patient.

The risk calculator has been released publicly and is available to surgeons, clinicians, and the public at www.riskcalculator.facs.org. According to Dr. Bilimoria, the calculator will be enhanced regularly with additional outcomes added to the tool, as well as release of mobile versions.

In addition to Dr. Bilimoria and Dr. Ko, other participants in the study were Yaoming Liu, PhD; Jennifer Paruch, MD; Lynn Zhou, PhD; Thomas E. Kmiecik, PhD; and Mark E. Cohen, PhD. The researchers are from the Division of Research and Optimal Patient Care, ACS; Surgical Outcomes and Quality Improvement Center, department of surgery, Feinberg School of Medicine, Northwestern University; and the department of surgery, University of California, Los Angeles, and VA Greater Los Angeles Healthcare System. This study was supported in part by the Agency for Healthcare Research and Quality. ◆

Dr. Arden Morris appointed to National Quality Forum Committee

The National Quality Forum (NQF) recently appointed Arden Morris, MD, MPH, FACS, colorectal surgeon and professor of surgery at the University of Michigan, Ann Arbor, to serve on the NQF Consensus Standards Approval Committee (CSAC).

The American College of Surgeons nominated Dr. Morris to serve on the CSAC, which is responsible for reviewing and approving proposed consensus standards and periodically assessing and recommending enhancements to the NQF’s consensus development process. Her term began in July.

For more information on the committee, go to http://bit.ly/NQFCSAC. ◆

ACS Convention and Meetings Director featured in magazine

The difference at Chicago’s newly privatized McCormick Place is “like day and night,” reports the American College of Surgeons (ACS) Convention and Meetings Director, Felix Niespodziewanski, who appears on the cover of the July 2013 issue of the M & C, Meetings and Conventions magazine.

Mr. Niespodziewanski, who has organized the ACS Clinical Congress since 1990, told the magazine that the McCormick Place staff is smaller but more efficient today. ◆
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FOR MORE INFORMATION, VISIT jacscme.facs.org
The annual meeting of the American Medical Association (AMA) House of Delegates (HOD) took place June 15–19 in Chicago, IL. More than 550 delegates as well as alternate delegates converged on the Windy City to consider and adopt policy for the AMA. Issues such as health care policy were discussed, educational sessions were presented, and caucuses and elections took place.

**Reports and resolutions**

The HOD reviewed more than 160 resolutions and 65 reports, including the following, centered on issues of relevance to surgeons:

- **Invasive procedures**: As originally submitted to the HOD, this report from the AMA Board of Trustees called for revising the current AMA definition of surgery and guidelines on invasive procedures for the treatment of chronic pain, including procedures using fluoroscopy. Efforts to bridge the definitions for surgery and procedures fell short. A revised report was adopted that retained the current AMA definition of surgery but focused only on invasive pain management procedures.

- **Recognition of obesity as a disease**: The ACS and 10 other medical/specialty societies cosponsored this resolution, which called on the AMA to recognize obesity as a disease with multiple pathophysiological aspects requiring a range of interventions to advance treatment and prevention. Evidence presented demonstrated that obesity is a metabolic disease that occurs as a result of unhealthy behaviors related to food and beverage consumption, lack of sufficient physical activity, as well as work, school, and messaging environments. The resolution further noted that obesity leads to chronic diseases, such as hypertension, heart disease, diabetes, and arthritis. The ACS delegation emphasized that metabolic (bariatric) surgeons are on the front lines of treating severe obesity with life-improving and lifesaving results. The resolution passed with a 60 percent majority of the delegates.

- **Payment variations across outpatient sites of service**: Cost transparency across sites of service was a major point of discussion, which received positive comments in reference committee testimony. In addition to adopting recommendations from the AMA Council on Medical Service to reaffirm some existing AMA policies related to Medicare payments across outpatient settings, the HOD adopted a recommendation that the AMA work with states to advocate for third-party payors to:
  - Assess equal or lower facility coinsurance for lower-cost sites of service (hospital outpatient department, ambulatory surgical center, or office-based facility)
  - Publish and routinely update pertinent information related to patient cost-sharing
  - Allow their plan’s participating physicians to perform outpatient procedures at an appropriate site of service as chosen by the physician and the patient

- **AMA support for states in their development of legislation to support physician-led, team-based care**: With a focus on physician-led, team-based care, this resolution was adopted and directed the AMA to assist state medical societies and specialty organizations with seeking passage of legislation that would define the valued role of mid-level and other health care professionals within a physician-led team that promotes optimal quality patient care and patient safety. The resolution also called on the AMA to actively...
oppose health care teams that are led by nonphysician health care practitioners.

• An update on Maintenance of Certification (MOC), Osteopathic Continuous Certification (OCC), and Maintenance of Licensure (MOL): A major topic of discussion was MOC, OCC, and MOL requirements. Many resolutions introduced expressed concerns regarding the implementation, cost, and additional exam burdens on physicians that these requirements pose. For the most part, these resolutions largely recommended that the Council on Medical Education continue to monitor the requirements and engage in ongoing dialogues with medical and licensing boards.

• Government interference in the practice of medicine and the patient-physician relationship: The AMA HOD passed several resolutions that led to the adoption of a Statement of Principles concerning the roles of federal and state governments in health care and the patient-physician relationship. These principles include:

  – Physicians should not be prohibited by law or regulation from discussing with or asking their patients about risk factors or disclosing information to patients, including proprietary information on exposure to potentially dangerous chemicals or biological agents that may affect their health or the health of their families, sexual partners, and other individuals with whom they have been in contact.

  – All parties involved in the provision of health care, including government, are responsible for acknowledging and supporting the intimacy and importance of the patient-physician relationship and the ethical obligations of the physician to put the patient first.

  – The fundamental ethical principles of beneficence, honesty, confidentiality, privacy, and advocacy are central to the delivery of evidence-based, individualized care and must be respected by all parties.

  – Laws and regulations should not mandate the provision of care that, in the physician’s clinical judgment and based on clinical evidence and the norms of the profession, is either unnecessary or ill-suited for a particular patient at the time services are rendered.

In addition, the AMA will oppose any government regulation or legislative action on the content of the individual clinical encounter between a patient and physician without a compelling and evidence-based benefit to the patient, a substantial public health justification, or both.

For a complete list of HOD actions, go to http://www.ama-assn.org/ams/pub/meeting/index.shtml.

**Elections**

AMA officers, trustees, and council members are elected during the annual meeting. This year, three members of the College were elected to serve on AMA councils and in other leadership positions, as follows:

• Maya Babu, MD, a neurosurgery resident at the Mayo Clinic, Rochester, MN, was elected to serve in the resident/fellow trustee position on the AMA Board of Trustees.

• Andrew Gurman, MD, FACS, a hand surgeon who practices in Altoona, PA, was re-elected as speaker of the HOD.

• Liana Puscas, MD, FACS, an otolaryngologist and assistant professor of surgery, Duke University Medical
School, Durham, NC, was elected to the AMA Council on Medical Education.

Ardis Dee Hoven, MD, assumed the presidency of the AMA. An internal medicine and infectious disease specialist from Lexington, KY, she is the 168th president of the organization and only the third woman to hold this office.

Other officers elected are as follows:
- President-elect: Robert M. Wah, MD, reproductive endocrinologist from Bethesda, MD
- Board of Trustees: Gerald E. Harmon, MD, a family physician from Pawleys Island, SC; and David O. Barbe, MD, re-elected, a family physician in Mountain Grove, MO
- Vice-Speaker of the HOD: Susan R. Bailey, MD, re-elected, an allergist in Fort Worth, TX

Surgical Caucus
The Surgical Caucus of the AMA brings together surgeons, anesthesiologists, and emergency physicians for focused discussions regarding relevant AMA resolutions that affect surgical interventions. The Caucus held a one-hour program titled Visiting the Surgical Home. Speakers provided a description of the concept of the surgical home, discussed how the surgical home improves coordination of patient care and relates to other models of coordinated care, and reviewed some of the benefits of implementing the surgical home.

ACS Delegation
The College was well represented by five delegates. New to the delegation was Leigh Neumayer, MD, FACS, a general surgeon from Salt Lake City, UT, and a member of the ACS Board of Regents. She joined four seasoned veterans of the HOD, including: John H. Armstrong, MD, FACS, trauma surgeon, chair of the delegation, and Surgeon General/Secretary of Health for the State of Florida; Jacob Moalem, MD, FACS, an endocrine surgeon from Rochester, NY; Richard Reiling, MD, FACS, a general surgeon from Charlotte, NC; and Patricia L. Turner, MD, FACS, a general surgeon and Director of the ACS Division of Member Services.

In addition, the College Delegation was assisted by Timothy Kresowik, MD, FACS, a vascular surgeon from Iowa City, IA, and an alternate delegate from the Society for Vascular Surgery, and Kenneth Louis, MD, FACS, a neurosurgeon from Tampa, FL, and an alternate delegate for the Florida Medical Association.

The delegation is open to comments and feedback on issues before the HOD as well as suggestions for resolutions. The November Interim HOD meeting will take place November 16–19 in National Harbor, MD. For surgeons who would like to become familiar with pending issues and policies, items of business will be posted in early November on the AMA website at http://www.ama-assn.org/ama/pub/about-ama/our-people/house-delegates.page. Fellows who follow this activity and have thoughts, comments, or questions may contact the ACS Delegation at jsutton@facs.org.
ACS and CoC join Choosing Wisely Campaign to identify overused procedures

The American College of Surgeons (ACS) and the Commission on Cancer (CoC) have joined more than 30 leading medical specialty societies in phase III of the Choosing Wisely® campaign initiated by the American Board of Internal Medicine (ABIM) Foundation. The campaign is a response to a 2012 report from the Institute of Medicine, Best Care at Lower Cost, which noted that up to 30 percent of health care spending is duplicative or unnecessary.

To date, the campaign has brought together more than 80 organizations, including medical societies, regional health collaboratives, and consumer partners to support important physician-patient conversations about using the most appropriate tests and treatments and avoiding care if its harm outweighs the benefits. To spark these conversations, leading specialty societies have created lists of evidence-based recommendations that should be discussed to help physicians and patients make wise decisions about the most appropriate care based on a patient’s individual situation.

Choosing Wisely currently has put forth a list of more than 130 potentially unnecessary medical tests and will add to that number in late 2013 and early 2014 with the lists submitted by phase III participating groups. The ACS and the CoC have recently developed evidence-based lists of five tests or procedures that may be overused in their specific fields. The ACS and CoC lists were released concurrently on the ACS and Choosing Wisely websites on September 4. For more information, visit http://www.facs.org/choosingwisely/.

Two ACS NSQIP® collaboratives receive AHA Davidson Quality Awards

The American Hospital Association (AHA) presented the Dick Davidson Quality Milestone Award, one of the AHA’s top national awards, to hospital collaboratives in Tennessee and Florida participating in the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP). The awards were presented July 25 during the AHA’s annual Leadership Summit in San Diego, CA, in recognition of the collaboratives’ leadership in quality improvement.

In their nomination entries, the Tennessee Hospital Association (THA) and Florida Hospital Association (FHA) cited their states’ ACS NSQIP results as key quality achievements. The THA helps lead the Tennessee Surgical Quality Collaborative (TSQC), the first ACS NSQIP collaborative that is a partnership between a hospital association, health plan, and an ACS local chapter. The 10 Tennessee hospitals participating in TSQC initially reduced complications by 36 percent and saved more than $5 million. The collaborative has now grown to 22 hospitals.

FHA partnered with the ACS to create the Florida Surgical Care Initiative (FSCI), based on four ACS NSQIP measures. The 67 hospitals participating in FSCI reduced complications by 14.5 percent and saved $6.67 million in 15 months. Visit the AHA website at http://www.aha.org/about/awards/davidson/index.shtml for more information about the Davidson Quality Awards.
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The Doctors Company has returned $287 million to our members through our dividend program.

The 2013 dividend is made possible by the excellent claims experience of our physician insureds. The Doctors Company is strong, with 73,000 members and $4 billion in assets. This strength allows us to deliver on our promise to defend, protect, and reward the practice of good medicine.

The Doctors Company also offers ACS members extensive benefits including a 5 percent program discount for members with favorable claims histories, a claims-free credit for eligible members, a Tribute Plan career award at retirement, and industry-leading patient safety tools and programs tailored to the needs of surgeons, plus free web-based and live CME.

The Doctors Company has been sponsored by the ACS since 2002. To join your colleagues as a member of The Doctors Company, call (800) 352-0320 or visit www.thedoctors.com/ACS to learn more about the many benefits of our medical malpractice insurance program.

*Available in eligible states.
The Clinical Trials Methods Course will take place December 6–10 at the American College of Surgeons (ACS) headquarters in Chicago, IL. The five-day intensive course, based on four successfully conducted and published clinical trials, consists of a combination of didactic lectures and hands-on sessions. A major portion of the course will occur in small group sessions mentored by leading surgeons and biostatisticians with expertise in clinical trials research. Participants will learn the design of a clinical trial based on concepts taught in the course.

Course faculty and didactic lectures, led by course chair Kamal M. F. Itani, MD, FACS, Veteran Affairs (VA) Boston Health Care System, MA, are shown on the table on this page.

Course registration is limited to 50 participants, and ACS members will receive preference. The course is offered only every other year. For additional information, visit the course website at http://www.facs.org/cqi/src/clintrial.html, or contact Carla Manosalvas at CTMCourse@facs.org.

**CLINICAL TRIALS METHODS COURSE**

**FACULTY AND DIDACTIC LECTURES**

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Chapter news

by Donna Tieberg

Italy Chapter hosts two ACS Presidents
The American College of Surgeons (ACS) Italy Chapter convened in Genoa, Italy, June 24–27, during the Congress Giornate Genovesi della Chirurgia Italiana, organized by Corradino Campisi, MD, FACS. Several other surgical societies participated in this conference, including the Joint National Congress of the Italian Society of University Surgeons, Emergency Surgery and Trauma, and Research in Surgery (see photo, this page). U.S. and European surgeons also attended the event, which took place at the historic Villa Quartara in Genoa, built in the 14th century.

Guests of honor at the meeting included ACS President A. Brent Eastman, MD, FACS; his wife Sarita Eastman, MD; and ACS Past-President Patricia Numann, MD, FACS. For the chapter plenary session, Dr. A. Brent Eastman presented a lecture on the “Disaster in Haiti.” Dr. Numann presented several lectures during the meeting, including a talk on “Women in Surgery.” Lucio Achille Gasparri, MD, FACS, the ACS Governor for Italy, organized the chapter meeting and was an active participant.

During the meeting, it was announced that Alessio Vinci, MD, department of surgery, University of Pavia, is the recipient of the 2013 Resident and Associate Society (RAS-ACS) International Exchange Program grant. Dr. Vinci will receive $2,500 from the RAS-ACS to participate in the ACS Clinical Congress, October 6–10, in Washington, DC. This RAS-ACS program allows for an exchange of residents and young surgeons between Italy and the U.S. The program was established by the RAS-ACS in 2012 with the support of the ACS International Relations Committee (IRC) through the collaboration of Daniela Molena, MD, assistant professor of surgery at Johns Hopkins Hospital, Baltimore, MD—who, at that time, was Chief of the RAS-ACS Membership Committee—and Giuseppe Nigri, MD, PhD, FACS, assistant professor of surgery at Sapienza University in Rome, Italy. Dr. Nigri is the Chapter Treasurer and a member of the IRC.

In addition, for the first time, thanks to the funding support of the ACS Italy Chapter, a young U.S. surgeon, Haytham M.A. Kaafarani, MD, a general surgeon at Massachusetts General Hospital, Boston, and recipient of the International Exchange Program Award, has been invited to participate in the 2013 Clinical Congress. Dr. Kaafarani is also an instructor at Harvard Medical School. Dr. Kaafarani was present at the recent chapter meeting in Genoa, where he received an award from the Italy Chapter Executive Council and presented a lecture titled Patient Safety in Surgery.

For the first time, the Italy Chapter meeting included a Student/Resident Competition. The winners of this competition were first-year resident Paolo Magistri, MD, from Sapienza University of Rome, and third-year resident Teresa Ciamporcero, MD, University of Turin. With funding from the ACS Italy Chapter, the two winners will participate in the 2013 Clinical Congress.

Lake of the Ozarks provides backdrop for Missouri Chapter meeting
The Missouri Chapter hosted its annual meeting May 31–June 2 at the Lodge of Four Seasons on the shores of the Lake of the Ozarks, MO (see photo, page 82). The three-day, well-attended event included many nursing colleagues.

The first day of the conference featured general surgery/trauma presentations, and on the second day, faculty,
fellows, residents, and medical students gave presentations on oncology. During the meeting, R. Phillip Burns, MD, FACS, First Vice-President of the American College of Surgeons, provided an update on College activities, and Julie Margenthaler, MD, FACS, Barnes Jewish Hospital, St. Louis, was installed as Chapter President. Attendees and their families also enjoyed a pool party and an evening cruise on the Lake of the Ozarks.

Next year’s annual meeting will take place at the Lodge of Four Seasons, May 29–June 1, 2014.

**Massachusetts Chapter plans second advocacy summit**

The Massachusetts Chapter has announced that it will hold its second annual Surgical Advocacy Summit on November 19 at the Massachusetts State House in Boston. At last year’s advocacy event, chapter members developed a partnership with state legislators and their staff, with a focus on ensuring patient access to sustainable high-quality surgical care. The upcoming summit will continue this collaboration and will include a discussion of the response to the April 15 Boston Marathon bombing. All Massachusetts surgeons are invited to attend this important event and are encouraged to invite Fellows, other colleagues, and residents.

For updated information on the second annual Surgical Advocacy Summit, go to www.mcacs.org.

**Residents present research papers at Tennessee Chapter annual meeting**

The Tennessee Chapter convened July 26–28 in Nashville, TN, for its annual meeting (see photos, page 83). More than 100 registrants attended multiple sessions, with representatives from the College’s leadership, the Commission on Cancer, the Committee on Trauma, and the Tennessee Surgical Quality Coalition.

R. Phillip Burns, MD, FACS, First Vice-President of the ACS and longstanding chair of surgery at the University of Tennessee, Chattanooga, provided an update on College activities. C. William Schwab, MD, FACS, from the University of Pennsylvania Medical Center, Philadelphia, offered a provocative presentation on firearm violence.

Dr. Schwab focused on the research and impact of gun violence in the U.S. and advocated further investigation of gun violence as a public health issue.

In addition, Darrell “Skip” Campbell, MD, FACS, director of the Michigan Surgical Quality Collaborative, provided an update on the Michigan group’s activities, Patricia Numann, MD, FACS, Past-President of ACS, was also actively involved with the annual meeting, commenting on resident presentations and giving a presentation titled Communication Skills: An Important Component on the Road to Success. Donna Tieberg, ACS Chapter Services Manager and author of this article, also attended the annual meeting and provided the Executive Council with an update on Chapter Services.

The Tennessee Chapter has long recognized the need for resident and young surgeon participation in the annual meeting. As in previous years, surgical residents provided paper presentations highlighting research in trauma, cancer, and clinical surgical science, with a total of 25 presentations.

Finally, a longstanding tradition for the Tennessee Chapter is the Saturday night banquet. This year, a nine-piece band, Soul Incision, consisting of physicians, nurses, and administrators from Vanderbilt University Medical Center, Nashville, entertained the crowd.

**Michigan Chapter 60th annual meeting features difficult surgical situations**

The Michigan Chapter presented its 60th Annual Meeting and 62nd Resident Surgeons Competition, May 15–17, at the Radisson Plaza Hotel in Kalamazoo, MI (see photo, page 84). More than 100 surgeons and surgery residents from around the
The Michigan Chapter meeting featured speakers from throughout North America to participate in this year’s conference, the theme of which was Difficult Situations in Surgery. Expert surgeons shared their troublesome experiences and offered their advice and feedback during roundtable discussions.

Darrell “Skip” Campbell, MD, FACS, director of the Michigan Surgical Quality Collaborative, provided an update on the group’s activities, and Martin McKneally, PhD, Joint Centre for Bioethics, University of Toronto, ON, gave the Krishna K. and Pamela E. Sawhney Ethics in Surgery Lecture, Ethics of Surgical Innovation: When Is It OK to Try Something New?

A major focus of the annual event is the resident competition. This year, 66 abstracts were submitted for consideration, and the top 54 were selected for presentation. This year’s resident surgeons competition winners are: Matthew Ralls, MD, University of Michigan, Ann Arbor, winner of the Frederick A. Coller Award, who took First Place Overall for Acute Nutrient Deprivation and Intestinal Environmental Variation: Potential Mechanisms that Drive Intestinal Mucosal Inflammation. The Alexander J. Walt Award, and Second Place Overall, went to Lindsey Korepta, MD, Grand Rapids Medical Education Partners, for Endovascular Repair of Ruptured Aneurysms after EVAR.

Tennessee Chapter.

Tennessee Chapter: From left: Joseph Cofer, MD, FACS, incoming Tennessee Chapter President; guest speaker Dr. Campbell; Oscar Guillamondegui, MD, FACS, outgoing Tennessee Chapter President; and guest speaker Dr. Schwab.
the topics of work/life balance and organized medicine at the Connecticut State Medical Society in New Haven, CT (see photo, this page). The session was well-attended, with 15 residents present, representing half of the training programs in Connecticut.

Organized by Committee Chairs third-year resident Jillian Fortier, MD, University of Connecticut Health Center, Farmington, and fourth-year resident Yuk Ming Liu, MD, Waterbury Hospital, the evening featured presentations by Chapter Past-President Kristen Zarfos, MD, FACS, attending surgeon, Saint Francis Hospital and Medical Center, Hartford, and assistant professor, University of Connecticut School of Medicine; Chapter President, Kathleen LaVorgna, MD, FACS, Norwalk Hospital; and Chapter Committee on Quality Co-Chair, Scott Ellner, DO, FACS, attending surgeon, Saint Francis Hospital and Medical Center.

Committee Mentor David Shapiro, MD, FACS, a general surgeon at Saint Francis Hospital and Medical Center, reminded residents that as long as they love what they do, they will evolve in their careers. All were then asked to share an interesting personal fact. What emerged were 15 unique and diverse personal portraits, with residents who were a part of the same program learning new information about each other.

Dr. Zarfos suggested that the residents look at life as a pie chart and that the balance they achieve will evolve as their priorities change. She also stressed the need to devote a piece of your “pie” to maintaining personal health. Dr. LaVorgna emphasized the importance of having a strong peer network as well as a senior mentor. Dr. Ellner reminded the residents that postresidency/fellowship life improves markedly and stressed the importance of keeping in touch with old friends and taking advantage of individual interests. He concluded by telling the residents that he believes it is important to look for an area where they may have an impact and then map their career path to achieve that goal.

At dinner, Dr. LaVorgna provided an overview of organized medicine, explaining how county and state medical societies interact with the American Medical Association (AMA). She also explained the role that the ACS plays within the AMA. The evening ended with presenters encouraging residents to become actively engaged in
Chile Chapter, the College, and organized medicine. The next scheduled session for Connecticut residents will center on financial planning.

Chile Chapter announces 2013–2014 Board of Directors
The Chile Chapter of the American College of Surgeons held its 57th Congress May 12–15, in Santiago, led by Chapter President Nelson Vidal Carvajal, MD, FACS. Topic highlights at the meeting included the prevention of disease, trauma, and pediatric surgery.

At the meeting, the chapter announced the 2013–2014 Board of Directors (see photo, this page). The new Board includes Ivan Alcoholado, MD, FACS; Victor Bianchi, MD, FACS; Patricio Burdiles, MD, FACS; Treasurer Felipe Catan, MD, FACS; Teresa Chomali, MD, FACS; ACS Governor Attila Csendes, MD, FACS(Hon); Owen Korn, MD, FACS; President-Elect Fernando Maluenda, MD, FACS; S. San Martin, MD, FACS; Hugo Nuñez, MD, FACS; Carlos Rivera, MD, FACS; and Nelson Vidal, MD, FACS.

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This issue of Selected Readings in General Surgery immerses itself in topics of interest to rural surgeons. These include the characteristics of rural practice, challenges in recruitment and retention, and a selective review of common clinical problems encountered in rural practice: trauma care, cutaneous surgery, endoscopy, gynecology, laparoscopic surgery, and urology.

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Registration for this service is quick, easy, and free.
The American College of Surgeons (ACS) Commission on Cancer (CoC) is hosting a paper competition for physicians in training to foster the importance of oncologic research in support of its mission.

**Eligibility**
Entries must adhere to the following eligibility requirements:

- Abstracts by residents and fellows in training on topics specific to oncology and related to the mission of the CoC will be considered.
- Abstracts that have been previously presented at a state, regional, or national meeting within the last 24 months will be considered.
- The manuscript must have not yet been published in a peer review journal and can only be submitted to one American College of Surgeons chapter. Original research is encouraged.

**Judging criteria**
Judging is based on originality, scientific merit, and clinical relevance to oncology

*See your specific state chapter announcement for eligibility details and time frames.

**Timeline**
Papers will be accepted **July 1, 2013**, through **June 30, 2014**.

**Awards**
The national award winners will be announced August 15, 2014. The winner will receive a $1,000 honorarium and travel expenses to present his or her research to the Annual Meeting of the CoC on October 26, 2014, in San Francisco, CA. The winning entry will be considered for publication in the *Journal of the American College of Surgeons*.

The authors of the second- and third-place abstracts will receive a $500 cash award and an invitation for a poster presentation of their research during the 2014 Annual Meeting of the CoC.

For more information, contact the ACS CoC Cancer Liaison Program at clp@facs.org, or contact your CoC State Chair at www.facs.org/cancer/coc/statecontact.html.

The CoC is a consortium of professional organizations dedicated to improving survival and quality of life for cancer patients through standard-setting, prevention, research, education, and the monitoring of comprehensive quality care.
Editor’s note: Media around the world, including social media, frequently report on the work of the American College of Surgeons (ACS). Following are brief excerpts from news stories published from June through August 2013 that mention key ACS activities and initiatives, including research findings that appear in the Journal of the American College of Surgeons. To access the news items in their entirety, visit the online ACS Newsroom at http://www.facs.org/newsroom/acs-in-the-news.html.

Online calculator assesses individual patient surgical risks
FierceHealthIT, August 19, 2013
“A new tool developed by the American College of Surgeons enables physicians and the public to more accurately assess the risk involved with 1,500 surgical procedures…. Detailed outcomes data from nearly 400 hospitals and 1.4 million patients was collected through the ACS National Surgical Quality Improvement Program. The creators rigorously tested the calculator and focused on using everyday language that would make it easy for the public to understand, according to an announcement.”

Virtual training helps surgical residents with patient management
FierceHealthIT, August 5, 2013
“Three-dimensional simulation technology via Second Life could be the basis for a new tool to help surgical residents fine tune their patient management skills, according to research published in the August edition of the Journal of the American College of Surgeons.”

For surgery, big and famous hospitals aren’t always the best
Reuters, July 31, 2013
“The American College of Surgeons collects data on surgical outcomes, such as the rate of infections at the surgical site and urinary tract infections, through its National Surgical Quality Improvement Program. The group will not release the data to the public because it promised confidentiality to hospitals providing the data, said Dr. Clifford Ko [MD, FACS], a cancer surgeon at [the University of California-Los Angeles] Jonsson Comprehensive Cancer Center who is involved in the project. However, 102 of about 500 participating hospitals voluntarily report some of their data to the federal Center[s] for Medicare [&] Medicaid Services.”

Fight back: When avalanche of anxiety and anger take over
Grand Rapids Press, July 21, 2013
“Identifying that level of distress and treating it has such a positive impact on our sticking with treatment, hastening recovery and even reducing healthcare costs, that ’starting in 2015 more than 1,500 cancer centers will need to screen...”
patients for distress to maintain their accreditation with the American College of Surgeons Commission on Cancer.”

**With Split Grafts, A Donor’s Liver Can Save Two Lives**
*Medical Daily,* July 17, 2013

“Split liver transplantation carries no increased risk of failure in either recipient, according to a new study published in the *Journal of the American College of Surgeons.* The process, whereby two partial grafts can be obtained from a single donated organ, could virtually eliminate waitlist mortality among young children in need of a new liver.”

**Doctors Tested in Boston Bombings**
*Gastroenterology & Endoscopy News,* July 2013

“Many surgeons credit the contributions of the American College of Surgeons’ Committee on Trauma (COT) in the success of the surgical response following the bombings. The mission of the COT is to develop and implement meaningful programs for trauma care in local, national and international arenas, and to provide professional development and standards of care. ‘Without the COT,’ Dr. [George] Velmahos. [MD, FACS] said, ‘we wouldn’t have trauma systems; we wouldn’t have trauma teams, centers, standard of codes of managing trauma patients, no policies or protocols. It is this exact system put together that allows us to practice at the level that we do.’”

**Cancer Registrars’ Role in the Era of Big Data**
*Advance,* July 3, 2013

“In 2012, the American College of Surgeons Commission on Cancer (CoC) began pulling and pushing its accredited facilities into an era of big data by setting standards that encourage the use of facility-wide data. The 2012 CoC standards made it clear that the registry could no longer be an adjunct operation of a facility treating cancer patients. The standards required an integrated approach to reviewing the facility’s operations and, in particular, its strengths and weaknesses.”

**Check Please: Choosing the Best Hospital for Your Cancer Surgery**
*CURE magazine,* June 17, 2013

“One good way to start is by searching for a hospital that’s accredited by an external organization, such as the National Cancer Institute, says John Birkmeyer [MD, FACS], who teaches surgery and directs the Center for Healthcare Outcomes and Policy at the University of Michigan in Ann Arbor, Mich.

The Commission on Cancer, created by the American College of Surgeons, also has an accreditation process. The more than 1,500 accredited cancer facilities make up 30 percent of all U.S. hospitals but care for about 70 percent of cancer patients, according to [Daniel] McKellar [MD, FACS], who chairs the commission.”

**Study: Quitting smoking helps surgical outcomes**
*Nurse.com,* June 21, 2013

“Smoking cessation at least one year before major surgery eliminates the increased risk of postoperative mortality and decreases the risk of arterial and respiratory events that are evident in current smokers, according to a study…. A total of 125,192 current and 78,763 past smokers from the American College of Surgeons National Surgical Quality Improvement Program database who underwent a major surgery were included in the study, which was published June 19 on the website of *JAMA Surgery.*”

Media around the world, including social media, frequently report on the work of the American College of Surgeons.
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The American College of Surgeons (ACS) Faculty Research Fellowships for 2013 were awarded earlier this year. These two-year fellowships are offered to surgeons entering careers in surgery or a surgical specialty and carry awards of $40,000 per year from July 1, 2013, through June 30, 2015. The ACS Scholarship Endowment Fund of the College sponsors the Faculty Research Fellowships. The Franklin H. Martin, MD, FACS, Faculty Research Fellowship of the ACS honors the founder of the College. The C. James Carrico, MD, FACS, Faculty Research Fellowship for the Study of Trauma and Critical Care honors the late Dr. Carrico. The one-year Louis Argenta, MD, FACS, Faculty Research Fellowship, presented by Kinetic Concepts, Inc., supports research in wound healing in honor of Dr. Argenta, a plastic surgeon.

The recipients of these fellowships are as follows:

• Franklin H. Martin, MD, FACS, Faculty Research Fellow: Aimee M. Crago, MD, PhD, assistant attending surgeon, Memorial Sloan-Kettering Cancer Center, New York, NY. Research project: Optimizing targeted therapy in liposarcoma—Co-amplification of MDM2 and CDK4 in liposarcoma genesis

• C. James Carrico, MD, FACS, Faculty Research Fellow: Todd Costantini, MD, assistant professor in residence, University of California, San Diego. Research project: Targeting the enteric nervous system to alter the inflammatory setpoint after acute intestinal injury

• Louis Argenta, MD, FACS, Faculty Research Fellow: Bao-Ngoc Nguyen, MD, assistant professor of surgery, George Washington University, Washington, DC. Research project: The role of Poly ADP Ribose Polymerase (PARP) in the Healing Process of Ischemic/Diabetic Wounds

Additional Faculty Research Fellowships for 2013–2015 were awarded to:

• William H. Peranteau, MD, assistant professor, Children’s Hospital of Philadelphia, PA. Research project: The study and manipulation of the fetal hematopoietic niche to optimize in utero transplantation

• Kevin T. Nguyen, MD, PhD, assistant professor of surgery, University of Michigan, Ann Arbor. Research project: Oncogenic function of CD44 in pancreatic cancer invasion and metastasis

The ACS website, http://www.facs.org/memberservices/acsfaculty.html, lists the description and requirements for this program. The application deadline for the 2014 Faculty Research Fellowships is November 1, 2013.

The Scholarship Endowment Fund provides income to fund scholarships and fellowships awarded by the Board of Regents. Direct contributions to support the Scholarship Endowment Fund are welcome. The ACS encourages Fellows who would like to make tax-deductible gifts to fund these vital programs to contact the ACS Foundation at 312-202-5338.
Six Resident Research Scholarships for 2013 were awarded by the American College of Surgeons (ACS) Board of Regents earlier this year. The scholarships, which carry awards of $30,000 for each of two years, beginning July 1, 2013, encourage residents to pursue careers in academic surgery. These scholarships are sponsored by the ACS Scholarship Endowment Fund.

The recipients of these scholarships are as follows:

- **Chi-Fu Jeffrey Yang, MD**, Duke University Medical Center, Durham, NC. Projected specialty: Surgical oncology. Research project: Copper reduction for BRaf mutation-positive melanoma


- **Cerine Jeanty, MD**, University of California, San Francisco. Projected specialty: Pediatric surgery. Research project: Th17 cells and intestinal inflammation in gastroschisis

- **Jason A. Luciano, MD**, University of Pittsburgh, PA. Projected specialty: Critical care. Research project: The role of the mitochondria and bioenergetics in regulating the immune response following trauma

- **Peter A. Than, MD**, Stanford University. Projected specialty: Surgery. Research project: Engineering an autologous implantable liver construct from the inside out

The description and requirements for these research-oriented scholarships are available on the College website, [http://www.facs.org/memberservices/acsresident.html](http://www.facs.org/memberservices/acsresident.html).

The Scholarship Endowment Fund, which provides income to fund scholarships and fellowships awarded by the Board of Regents, welcomes direct contributions to the fund. Fellows who want to make tax-deductible gifts to support these vital programs should contact the ACS Foundation at 312-202-5338.
Apply by November 1 for Faculty Research Fellowships

The American College of Surgeons (ACS) is offering two-year faculty research fellowships, through the generosity of Fellows, Chapters, and friends of the College, to surgeons entering academic careers in general surgery or a surgical specialty. The fellowships are intended to assist a surgeon in the establishment of a new and independent research program. Applicants should have demonstrated their potential to work as independent investigators. The fellowship award is $40,000 per year for each of two years, to support the research. The closing date for receipt of completed applications and all supporting documents is November 1, 2013.

General policies covering the granting of the ACS Faculty Research Fellowships are:

- The fellowship is open to Fellows or Associate Fellows of the College who have: (1) completed the chief residency year or accredited fellowship training within the preceding three years; and (2) received a full-time faculty appointment in a department of surgery or a surgical specialty at a medical school accredited by the Liaison Committee on Medical Education in the U.S. or by the Committee for Accreditation of Canadian Medical Schools in Canada. Preference will be given to applicants who directly enter academic surgery following residency or fellowship.

- Recipients may use this award to support their research or academic enrichment in any fashion that they deem maximally supportive of their investigations. The fellowship grant is intended to support the recipient’s research and is not intended to diminish or replace the usual, expected compensation or benefits. Indirect costs are not paid to the recipient or to the recipient’s institution.

- Application for this fellowship may be submitted even if comparable application has been made for other fellowships, such as those available through the National Institutes of Health (NIH) or industry. If the recipient is offered a scholarship, fellowship, or research career development award from such an agency or organization, it is the responsibility of the recipient to contact the College’s Scholarships Administrator to request approval of the additional award.*

- The College encourages the applicant to leverage the funds provided by this fellowship with time and monies provided by the applicant’s department. Formal statements of matching funds and time from the applicant’s department will promote favorable review by the College.

- Supporting letters from the head of the department of surgery (or the surgical specialty) and from the mentor supervising the applicant’s research effort must be submitted. This approval would involve a commitment

*The Scholarship Committee reserves the right to review potentially overlapping awards and adjust its award accordingly.

ACS Faculty Research Fellowships

- Franklin H. Martin, MD, FACS, Faculty Research Fellowship of the American College of Surgeons. This fellowship honors Franklin H. Martin, MD, FACS, ACS founder.

- C. James Carrico, MD, FACS, Faculty Research Fellowship for the Study of Trauma and Critical Care. This fellowship honors C. James Carrico, MD, FACS, and is designated for research in trauma and critical care.

- Louis Argenta, MD, FACS, Faculty Research Fellowship for the Study of Wound Care. This one-year fellowship honors Louis Argenta, MD, FACS, and is designated for research in wound care.
The fellowships are intended to assist a surgeon in the establishment of a new and independent research program.

to continuation of the academic position and of facilities for research. Only in exceptional circumstances will more than one fellowship be granted in a single year to applicants from the same institution.

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

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

• The Martin and Carrico Fellows are expected to attend the 2016 ACS Clinical Congress to present a report at the Surgical Forum and to receive a certificate at the annual meeting of the Scholarships Committee.

• The Dr. Louis Argenta Faculty Research Fellowship, supported by Kinetic Concepts, Inc., is a one-year award in the amount of $40,000 to help a surgeon establish an independent research program on wound care. All of the same requirements apply as for the Martin and Carrico Fellows, except that the time period is one year. The Argenta Fellow will attend and report at the 2015 Clinical Congress.

Application forms may be obtained from the College’s website, www.facs.org, or upon request from the following address.

Send applications to kearly@facs.org or to Scholarships Section, American College of Surgeons, 633 N. Saint Clair St., Chicago, IL 60611-3211.

ACS Members who are recertifying can now enjoy the ease of submitting their ACS CME credits directly to the American Board of Surgery (ABS).

From members’ MyCME page, click on the “Send CME to ABS” option at the top of the page.

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2013 Traveling Fellow to Germany reports on experiences

by Anneke T. Schroen, MD, MPH, FACS

With gratitude to the American College of Surgeons (ACS) and the German Surgical Society (Deutsche Gesellschaft für Chirurgie, DGC), I report on my experiences as the 2013 Traveling Fellow to Germany. The trip included attendance at the 130th Congress of the German Surgical Society and visits to four different institutions that provide breast surgery services and are involved in oncology clinical trial accrual.

**Frankfurt—German Breast Group**
The successes in clinical trial completion that European breast oncologists have experienced intrigue me. Clinical trials from Germany and other European countries have been featured prominently at breast oncology meetings in the U.S. To learn more about their efforts, I visited the German Breast Group (GBG), headquartered in Neu-Isenburg near Frankfurt. This cooperative group conducts mostly phase II and III trials. More than 5,000 patients participated in their trials last year. The GBG maintains a robust portfolio that strikes a balance between prevention, neoadjuvant, adjuvant, and palliation studies, with an emphasis on investigator-initiated trials. Although funding comes from a combination of public, philanthropic, and industry sources, the group is committed to preserving its independence and academic orientation.

Concept-to-activation times for trial development are significantly shorter than those reported for oncology clinical trial cooperative groups in the U.S. Trial activation processes at local institutions use central institutional review boards (IRBs). Incentives for local investigator participation include authorship for high recruiters, which is critical for professional advancement; access to the latest treatment agents; and breast center certification requirements of at least 10 percent of patients enrolled in clinical trials.

I shared with GBG some of my research in clinical trial accrual in the cooperative group setting. Our discussion proved to be an informative exchange of experiences and ideas. The friendliness of the GBG staff was much appreciated and made for a welcome reception just a few hours after my arrival in Frankfurt.

**Berlin—HELIOS Klinik and the Langenbeck-Virchow-Haus**
The following morning I traveled by train to Berlin. The German capital is vibrant and dynamic, offering an abundance of historical and cultural sites. Certainly the city has undergone profound changes in the last 20 years, rendering places I had seen on my first trip there in the summer of 1990 virtually unrecognizable.

A primary focus of my fellowship was to observe multidisciplinary health care delivery for breast cancer in Germany. To this end, I wanted to visit a breast center in both a private clinic setting and a university setting. Today, breast cancer care in Germany is largely delivered in nationally certified breast centers. To improve quality-of-care standards and reduce practice variability in breast cancer care, the German Cancer Society (Deutsche Krebsgesellschaft, DKG) and
the German Society of Senology (Deutsche Gesellschaft für Senologie, DGS) developed evidence-based clinical guidelines and a program for breast center certification approximately 10 years ago. More than 70 percent of women with breast cancer in Germany are now estimated to receive their diagnostic and therapeutic interventions in a certified breast center. Continuous quality improvement includes monitoring adherence to guideline recommendations and process quality indicators.

Of note, breast cancer surgery in Germany is a clinical domain of gynecology, rather than general surgery as it is in the U.S. My first clinical visit was at the HELIOS Klinik in Berlin-Buch. Here I was greeted by the chefartz (chief), Prof. Dr. med. Michael Untch, and by oberärztin (attending) Dr. med. Christine Mau. After participating in the morning report, I was thrilled to spend the day in the operating room (OR) assisting Dr. Mau. We performed five breast operations, including one with intraoperative radiation therapy. It was interesting to observe minor differences in technique. However, most fascinating was the rapid OR turnover. With each turnover well below 30 minutes, and some even less than 15 minutes, I saw a very different workflow than I have seen in the U.S. Also impressive was the large amount of natural light in the ORs.

The HELIOS Klinik breast center enrolls many patients in clinical trials. Two of the five patients I saw in the OR were participating in a therapeutic clinical trial.

The following day I visited the Langenbeck-Virchow-Haus to see the DGC’s headquarters (see photo, page 95). I received a very kind reception from Rosmarie Nowosiski, PhD, director of the DGC. She took time away from preparing for the upcoming conference to provide me with historical information about the society and the building in which it is housed. The DGC first began hosting meetings in this building in 1915. Following World War II, the building became the property of the German Democratic Republic. The DGC regained ownership of the building in 2003, along with the original co-owners, the Berlin Medical Society, after a protracted legal battle. Dr. Nowosiski provided a tour of the building and helped arrange additional meetings for me. She and her staff are clearly committed to making the visiting Fellow’s experience a rich and rewarding one.

**Munich—Ludwig Maximilian Universität**

Munich was the next stop. I was fortunate to spend several days with the Ludwig Maximilian Universität (LMU) Breast Center team at both clinical sites: Campus Innenstadt and Campus Grosshadern. The Women’s Clinic at Campus Innenstadt is housed in buildings dating to 1916 (see photo, this page). Many of the decorations, clocks, and door inscriptions are the originals. The buildings are constructed around a tranquil courtyard and fountain, with patient rooms facing inward to shield against outside noise. Open terraces also invite patients to sit outside and take in fresh air. The more modern Campus Grosshadern constitutes one of the largest hospital complexes and teaching institutions in Germany.

Prof. Dr. med. Nadia Harbeck, director of the Breast Center, made the arrangements for my visit. Through interactions in the clinic and the OR, I was able to observe a high-functioning multidisciplinary...
Interestingly, most of the gynecologists whom I met had developed a particular focus within breast care, enabling them to work together as a team. Some physicians devote their time primarily to medical therapies and clinical trials, others to breast surgery and reconstruction, and one other to image-guided procedures. Again, a robust portfolio of clinical trials was available to patients, and offering clinical trial participation was notably a priority.

In addition to spending considerable time with Prof. Harbeck, I had the pleasure of meeting with Oberärztinnen Dr. med. Rachel Würstlein and Dr. med. Isabelle Himsl. Through their clinics and multidisciplinary tumor board meetings, I learned about the delivery of breast cancer screening, treatment plans, and survivorship care in the German health care system. Our discussions regarding various practice differences between the U.S. and Germany, such as the higher mastectomy rate for early stage breast cancer in the U.S. and the central role of the primary care physician in delivering survivorship care in Germany, were thought-provoking. Furthermore, I am thankful for the time and sample patient resources that Frau Brigitte Ehrl, breast center nurse and patient navigator, provided.

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130th Congress of the DGC

The 130th Congress of the DGC took place in Munich this year with more than 8,000 surgeons and surgical trainees in attendance. The first morning, I presented highlights from my research in a talk titled Rethinking Phase III Oncology Clinical Trial Accrual: Predictors of Accrual Success. The session on clinical trials was very interesting, and I learned about the successes and challenges surrounding surgical trials in Germany.

Updates on two surgical studies nearing completion, PROUD and Synchronous, were given, as were presentations on ChirNet and the Studienzentrum der Deutschen Gesellschaft für Chirurgie (SDGC) in Heidelberg. (I would travel to Heidelberg later to learn more about these programs.) Prof. Dr. med. Norbert Senninger, FACS, ACS Governor for Germany, kindly attended my presentation. As the primary contact for the American Traveling Fellows to Germany, Prof. Senninger also met with me at the start of the conference to answer my questions with regard to the conference and to ensure that I was included in all social events (see photo, this page).

Prof. Dr. med. Hans-Joachim Meyer, DGC Secretary-General, also met with me. I very much appreciated his time and our discussion on the challenges of surgical training in the face of work-hour restrictions and the challenges of keeping large, general surgical conferences relevant in the setting of increasing subspecialization.

The opening ceremonies of the DGC Congress took place in the assembly hall of the Ludwig Maximilian University. The presidential address of Prof. Dr. med. Karl-Walter Jauch introduced the themes of the conference. The primary theme focused on strengthening professionalism and retaining public trust through passion and judgment (sachliche Leidenschaft und distanziertes Augenmass). Economic pressures and increased competition were depicted as burdening the specialty’s sense of professionalism and, in part, contributing to a recent scandal among certain transplant centers in Germany. Regaining and maintaining public trust would require greater accountability, more balanced resource distribution, and further emphasis on transparent patient outcomes.

A secondary theme involved care of an aging population. Although many operations have now been shown to be
Our discussions regarding various practice differences between the U.S. and Germany, such as the higher mastectomy rate for early stage breast cancer in the U.S. and the central role of the primary care physician in delivering survivorship care in Germany, were thought-provoking.

safely performed even in elderly patients, the surgeon must remain forthright about potential complications of and alternatives to surgery. Both themes developed in this excellent address underscored that our profession faces similar challenges in the U.S. and in Germany, despite the differences in health care systems.

The diverse and interesting scientific program concluded with special presentations on navigating risk and uncertainty. Thomas Huber, a professional extreme mountain climber from Bavaria, gave an inspiring yet humorous talk on his experiences seeking out the most challenging peaks and his personal battle with cancer. Prof. Dr. Gerd Gigerenzer, director of the Max Planck Institute for Human Development and former visiting professor at my home institution of the University of Virginia, Charlottesville, delivered a keynote address on The Illusion of Certainty. Professor Gigerenzer spoke on how common misunderstanding and, in some cases, deliberate misrepresentation of cancer statistics influence medical decision making and resource use.

The conference also featured several memorable social events. I participated in a 6K race through the English Gardens, organized to heighten awareness about organ donation, followed by a festive evening in the Augustinerkeller hosted by the German Society for General and Alimentary Surgery (Deutsche Gesellschaft für Allgemein- und Viszeralchirurgie). The mood remained celebratory throughout the evening not only due to drink and camaraderie, but also the 3–0 victory of FC Bayern over Barcelona in a semi-final game of the European Champions League soccer tournament. At the conclusion of the Congress, I had the honor of attending the president’s dinner at the former royal residence in Munich. Having my father, a Munich native, accompany me to this elegant gala was a once-in-a-lifetime opportunity (see photo, page 99).

**Heidelberg—Studienzentrum der Deutschen Gesellschaft für Chirurgie**

After hearing presentations on the Study Center of the German Surgical Society (Studienzentrum der Deutschen Gesellschaft für Chirurgie—SDGC) and ChirNet at the Congress, I was delighted to obtain an invitation to visit this program at the University of Heidelberg. Now in its 10th year, the SDGC conducts randomized controlled trials investigating surgical therapies, techniques, and materials. ChirNet is a network of eight regional surgical centers providing infrastructure for the implementation of patient-oriented clinical trials in surgery. Inga Rossion, physician and business director of the SDGC, and Dr. med. Markus Diener were my hosts for this visit.

I presented my research on cancer clinical trial accrual to their extended team involved in clinical trial design and management, as well as surgery residents learning about clinical trial research. I found our discussions about their processes for trial concept prioritization and design highly informative. Their processes include formal systematic literature reviews for each research question, with staff dedicated to this function. I found this aspect of their operations particularly impressive. Government grant funding is commonly sought to support individual trials. In addition to funding, a challenge for clinical trials in Germany includes improving follow-up compliance. Most patient care after a primary surgical or oncologic treatment is completed reverts to the local primary care physician. I found their efforts to conduct well-designed surgical trials very laudable and anticipate that this visit has initiated an enduring exchange of ideas.

**International fellowship**

I extend my thanks to the ACS and its International Relations Committee for a motivating and enlightening experience. The professional friendships and collaborative opportunities forged through this fellowship surely represent a highlight in my academic career. I am deeply grateful to Prof.
Dr. Schroen and her father, Walter Schroen, enjoying the German Surgical Society’s black-tie gala in the Residenz, Munich.

Senninger, the German Surgical Society, and my hosts in Berlin, Munich, Heidelberg, and Neusenburg for welcoming me to their organizations and allowing me to learn about their professional activities. I appreciate the encouragement to pursue a traveling fellowship that my chairman, Irving Kron, MD, FACS, and division chief, Reid Adams, MD, FACS, both of whom are former ACS traveling fellows, provided to me. My gratitude certainly extends to my colleagues at the University of Virginia and my husband for making my month-long absence from work and home possible.

Based on this experience, I strongly encourage my American colleagues to visit surgical institutions in Germany and to participate in the College’s international fellowships. Attending our visiting fellows’ presentations at the ACS annual Clinical Congress, hosting an international fellow, or applying for an ACS traveling fellowship support the important mission of fostering scholarship and forging professional associations. ♦
Calendar of events*

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

**OCTOBER**

ACS Clinical Congress
October 6–10
Washington, DC
www.facs.org/ClinCon2013

Minnesota Surgical Society—
a Chapter of the ACS
October 18—19
Alexandria, MN
Contact: Nonie Lowry,
events@lp-etc.com

**NOVEMBER**

Connecticut Chapter
November 1
Farmington, CT
Contact: Chris Tasik,
information@ctacs.org, http://ctacs.org/

Keystone Chapter
November 8
Danville, PA
Contact: Lauren Ramsey,
lramsey@pamedsoc.org,
http://www.keystonesurgeons.org/

Wisconsin Surgical Society—
a Chapter of the ACS
November 8
Kohler, WI
Contact: Terry Estness,
wisurgical@att.net,
http://www.wisuricalsociety.com/

Maryland Chapter
November 9
Sheraton Inner Harbor
Baltimore, MD
Contact: Jennifer Starkey,
maryland@marylandfacs.org

Arizona Chapter
November 9–10
Phoenix, AZ
Contact: Joni L. Bowers,
jonib@azmed.org,
http://www.azacs.org/

**DECEMBER**

Brooklyn-Long Island Chapter
December 4
Uniondale, NY
Contact: Teresa Barzyz,
acsteresa@aol.com,
http://www.bliacs.org/

Massachusetts Chapter
December 7
Boston, MA
Contact: Crystal Beatrice,
cbeatrice@prri.com,
http://www.mcacs.org/

New Jersey Chapter
December 7
Iselin, NJ
Contact: Andrea Donelan,
njsurgeons@aol.com,
http://www.nj-acs.org/index.html

**FUTURE CLINICAL CONGRESSES**

2014
October 26–30
San Francisco, CA

2015
October 4–8
Chicago, IL

2016
October 16–20
Washington, DC

**JANUARY**

Louisiana Chapter
January 17–19, 2014
New Orleans, LA
Contact: Janna Pecquet,
janna@laacs.org,
http://www.laacs.org/

Southern California Chapter
January 17–19, 2014
Santa Barbara, CA
Contact: Jim Dowden,
jdowden@prodigy.net,
http://www.socalsurgeons.org/index.html