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On the cover: Surgeons and other health care providers are stepping forward to lead quality improvement efforts, as demonstrated by the College’s Inspiring Quality initiative and the growth of the ACS National Surgical Quality Improvement Program (see articles, pages 6 and 9).
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The American College of Surgeons is dedicated to improving the care of the surgical patient and to safeguarding standards of care in an optimal and ethical practice environment.
Looking forward

Most of us would agree that surgery is one of the most intellectually, physically, and emotionally challenging professions one could choose. In fact, many of us became surgeons because we were confident that we were smart enough, energetic enough, and strong enough to meet those demands and still have fulfilling personal lives. As we mature, we often find ourselves humbled at the realization that we have limitations. Nonetheless, our passion for excellence and for patient care drives us to keep pushing through and demanding the best of ourselves and our colleagues.

Understanding surgeons

Few people outside of our profession truly seem to understand why we take on these pressures, let alone the surgeon’s psyche and culture. The arrogant, unfearing, adrenaline- and ambition-fueled surgeons often depicted in novels, television programs, movies, and other media are what most people know. These characters are often created by individuals who have had limited contact with actual surgeons. As a result, the public often has a distorted image of us.

So, it is refreshing to occasionally come across a piece of fiction that is written by a surgeon, who is more likely to present us as we truly are—warts and all. I recently had the pleasure of reading *A Few Small Moments*, a collection of short stories written by Carol Scott-Conner, MD, FACS.

A look inside

All of the stories in *A Few Small Moments* center on the character of Beth Abernathy, a cancer surgeon at a Midwestern teaching hospital who is entering her sixth decade of life. Dr. Scott-Conner’s stories portray surgeons as complex, intelligent, highly motivated, and caring people who sometimes grow frustrated with our own limitations and with the constraints of the environment in which we work.

As chair of surgery at her institution, Dr. Abernathy sometimes must confront a surgeon who is exhibiting unprofessional behavior and poor responses to stress. When, at one point, she finds herself exploding and acting out in the face of her own perceived failure to adequately evaluate a patient’s condition, Beth realizes that, “Unbridled anger is the Achilles heel of surgeons like us.” She sees some of herself in the younger, more reckless surgeon and offers to help her find ways of changing her behavior.

Chairs of surgery also must deal with their insti-
tutions’ internal politics, financial issues, and other administrative burdens. They must answer to deans, who are more deeply entrenched in the administrative mindset. Beth believes she is increasingly pulled in three different directions, needing to devote large shares of her time and energy to patient care, teaching and writing, and meetings. She thinks about early retirement or stepping down from the chairmanship and rededicating herself to seeing patients and teaching.

Ultimately she chooses to continue practicing because, despite the headaches, she knows she is a good surgeon and a competent teacher who really enjoys surgery. Working with even the most difficult patients, who engage in the most self-destructive behaviors, provides her with new opportunities to learn and grow as a professional and as a person. Watching surgical residents develop new skills and providing them with guidance brings its own rewards.

Beth develops deeper empathy for her patients when she experiences atrial fibrillation and must be admitted into the cardiac unit at her institution. She learns what it means to feel vulnerable and to allow another human being to take control of your life, what it’s like to recuperate slowly, but steadily.

A dynamic profession

The book closes with a short recitation on “the making of surgeon,” in which Dr. Scott-Conner ties the underlying message of each story together and aptly describes the true character of most surgeons. She notes, “When we recommend surgery and take a patient to the operating room, we change that person’s life forever, most often for the better. . . . We live in a very real way with our successes and our occasional failures.” We need to be able to work under incredible pressure and maintain a sense of optimism and a high energy level.

She also discusses some of the changes that are occurring in the field. When Dr. Scott-Conner entered surgical practice in 1981, she had few female peers. When she was appointed head of the department of surgery at the University of Iowa (Iowa City) in 1995, she was only the second woman in the U.S. to attain a chairmanship. She notes that today nearly half of all medical students who choose general surgery training are women.

Dr. Scott-Conner’s personal story and the ones she tells in *A Few Small Moments* convey the daily challenges that all surgeons—young and old, male and female—experience. She reinforces the importance of being willing to lean on our families and colleagues when work overwhelms us, of taking a realistic assessment of our goals and capabilities, and of listening to our patients. This book truly provides fresh insights into what makes us tick and why we are so committed to our pursuit of surgical excellence.

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If you have comments or suggestions about this or other issues, please send them to Dr. Hoyt at lookingforward@facs.org.
The American College of Surgeons (ACS) officially launched its Inspiring Quality initiative at the Chicago Surgical Health Care Quality Forum at College headquarters on July 18—an event that provided the opportunity for nearly 50 Chicago health care leaders to discuss how quality improvement programs can reduce preventable hospital readmissions, prevent medical errors, improve patient outcomes, and reduce costs.

During the kickoff meeting—the first in a series of community forums across the U.S. aimed at encouraging hospitals to share best practices in quality improvement—the ACS announced its goal to enroll a minimum of 1,000 hospitals in its National Surgical Quality Improvement Program (ACS NSQIP®). Planning for additional forums in Washington state, Maryland, Massachusetts, Pennsylvania, Texas, Virginia, and California is under way.

In welcoming attendees and setting the stage for the discussion during the community forum, David B. Hoyt, MD, FACS, ACS Executive Director, said, “The American College of Surgeons has a century-long history of setting standards, measuring outcomes, and using outside verification to improve the quality of care. Our quality programs are proven to prevent complications, save lives and lower costs.” He added, “If we could get ACS NSQIP into more hospitals around the country, we could prevent millions of complications, save thousands of lives and reduce costs by billions of dollars—every year.”

Dr. Hoyt reported that ACS NSQIP has been shown to help hospitals significantly reduce complications, save lives, and reduce costs. He pointed to a 2009 study in the Annals of Surgery that found that participating hospitals prevent 250–500 complications and save 13–26 lives per hospital per year. At an average cost of $11,000 per complication, hospitals can save millions of dollars a year.*

U.S. Sen. Mark Kirk (R-IL) served as keynote speaker at the event, and panelists included leaders from Chicago academic medical centers, medical schools, hospitals, and not-for-profit health care or-

Scenes from the Inspiring Quality launch at College headquarters:

1. Senator Kirk (left) and the panel (left to right): Dr. Chassin, Dr. Perez-Tamayo, Dr. Benedetti, Dr. Matthews, Dr. Reynolds, Dr. Soper, Dr. Ko, Dr. Britt, and Dr. Hoyt.
2. Senator Kirk.
3. Dr. Britt and Dr. Hoyt.
4. The ACS Board Room during the program.
5. Dr. Hoyt in discussion with program speakers and attendees.
ganizations. L. D. Britt, MD, MPH, FACS, FCCM, FRCSEng(Hon), FRCSIEd(Hon), FWACS(Hon), ACS President, kicked off the discussion by asking Senator Kirk if his colleagues in Washington, DC, understand that quality improvement programs save money as well as save lives.

“The College’s programs prove that quality can equal cost-effectiveness,” said Dr. Britt. “We’re here talking about saving lives and reducing costs.”

“Almost every decision in Washington now is being made in reference to the collapsing credit of the U.S. and the potential inability for both the state of Illinois and the federal government to borrow money over time,” responded Senator Kirk. “At that point, quality is sacrificed.”

Senator Kirk’s solution to the nation’s health care crisis includes implementing national malpractice reform, and he cited California and Texas, where such changes have already been made, as models for this reform.

Dr. Britt queried the junior senator from Illinois on potential cuts to graduate medical education, which Dr. Britt considers to be “pivotal to ensuring quality [patient care].”

“I support graduate medical education. [However,] part of my job as a young senator is be clear, concise, and transparent, and I need to tell you not what you want to hear, but what you need to hear,” said Senator Kirk, who warned meeting attendees that virtually every organization that depends on federal funding should expect a 10 to 20 percent drop in funding.

Following Senator Kirk’s address, panelists addressed the importance of quality improvement efforts in their own institutions. “The Joint Commission has had a very long-standing and close partnership with the American College of Surgeons that has now entered into a new era with the creation of the Joint Commission Center for Transforming Healthcare,” said Mark Chassin, MD, FACP, MPP, MPH, president, The Joint Commission, and one of the panelists at the community forum. “I think the most important first step for hospitals to realize true quality improvement is for the entire leadership of the hospital—from nurses and surgeons, to executive management and in some cases, members of the board—to come together and make a commitment to higher levels of patient safety. Without this commitment from the top down, we can’t expect it to work.”

“Quality is the cornerstone mission,” noted panelist Nathaniel Soper, MD, FACS, surgeon-in-chief, Northwestern Memorial Hospital. “We were an early adopter of ACS NSQIP, and we knew that to improve outcomes a culture change was necessary. We’ve now seen a 30 percent reduction in claims related to surgical care and the number of malpractice claims has decreased by 80 percent.”

“Over the past decade, we’ve learned a lot about what works and what doesn’t to improve health care quality,” added Clifford Ko, MD, FACS, director of the College’s Division of Research and Optimal Patient Care.

“We are now on the verge of significant changes in our health system. We know the ACS NSQIP methodology that has been developed and refined over the past decade is effective in improving care, and we now hope to spread these learnings and successes to more hospitals across the country.”

As part of the initiative, the ACS has also released a series of videos that capture what “inspiring quality” means from the perspective of patients, surgeons and the overall industry. These videos can be found on the ACS website at http://www.facs.org/quality. Additional videos will be added to the site as meetings are held across the country.

Mr. Peregrin is Senior Editor of the Bulletin of the American College of Surgeons, Chicago, IL.
Since the American College of Surgeons (ACS) launched the Inspiring Quality: Highest Standards, Better Outcomes campaign this spring, the organization has stepped up its efforts to educate health care leaders, policymakers, and other stakeholders about the four fundamental concepts in quality improvement. As Dr. Hoyt noted in his August 2011 “Looking forward” column in the Bulletin, these principles are as follows: (1) setting standards for care; (2) collecting robust clinical data; (3) ensuring the appropriate infrastructure is in place; and (4) verifying quality through third parties.

ACS NSQIP participation

One College program that is playing a central role in its effort to help surgeons and surgical institutions apply the four principles of quality improvement is the ACS National Surgical Quality Improvement Program (ACS NSQIP). Saint Francis Hospital and Medical Center in Hartford, CT, has participated in ACS NSQIP since 2007. Using the tools available to ACS NSQIP participants, Saint Francis has implemented projects aimed at preventing complications and improving patient outcomes. As a result, Saint Francis has reduced its catheter-associated urinary tract infections (CA-UTI) by 62 percent and has lowered rates of postoperative pneumonia and the number of patients who remain on the ventilator for more than 48 hours by 58 percent and 29 percent, respectively.

A 617-bed, tertiary-care, Level II trauma center affiliated with the University of Connecticut School of Medicine that has an integrated residency program in general surgery, Saint Francis enrolled in ACS NSQIP because of the broad opportunities for quality improvement it affords. Examples of these opportunities include the following: initiatives to reduce hospital-acquired conditions (HACs); a forum for research and education for students and residents; multidisciplinary rounds to foster collaboration among the nurses, surgeons, anesthesiologists, and administrators; and an effective method of demonstrating outcomes to payors. Most importantly, ACS NSQIP has been a powerful means of effecting cultural change in the organization. Saint Francis staff are now better able to promote transparency and to encourage safe standards of care.

by Scott J. Ellner, DO, MPH
Upon joining ACS NSQIP, Saint Francis’ departmental surgical services performance improvement committee became a robust forum for discussing actionable outcomes. Previously, this facility relied on mandated process measures from the Centers for Medicare & Medicaid Services (CMS) developed through the agency’s Surgical Care Improvement Program (SCIP) and random claims data for benchmarking. Although CMS’ intentions to use SCIP to measure quality are good, this system lacks the capacity to provide important information about outcomes. Without 30-day postoperative outcomes measures, Saint Francis was missing the critical data needed to drive performance improvement. Conversely, the hospital’s ACS NSQIP data were organized and statistically analyzed through a structured framework for risk adjustment and accurate benchmarking.

Applying the data

Within a year of joining ACS NSQIP, specific areas for improvement became evident. In particular, the observed number of CA-UTIs was far greater than the expected value for similar ACS NSQIP hospitals. Saint Francis medical staff shared these data with senior administration and developed an action plan to reduce CA-UTI rates using ACS clinical guidelines that were made available through the NSQIP program specifically for UTI prevention.

Additionally, an interdisciplinary committee of key stakeholders was appointed to analyze ACS NSQIP CA-UTI data and identify causality. It was found that unneeded, indwelling urinary catheters were placed in surgical patients in the emergency department, operating room, and surgical floors. Moreover, patients were receiving an indwelling urinary catheter, as opposed to intermittent catheterization, for postoperative urinary retention (POUR).

The CA-UTI committee used the findings from the ACS NSQIP data and recommendations from the College to develop hospital-wide guidelines for insertion, aseptic maintenance, and early removal of indwelling urinary catheters. Medical staff addressed POUR through effective use of bladder scanners to minimize reflexive placement of an indwelling urinary catheter for low urine output. Initially, a pilot study was conducted on surgical wards for implementation of the CA-UTI bundle. Through auditing, additional areas for improvement were identified, including education on catheter maintenance, accurate counting of patients with catheters, and physician awareness that their patients have a urinary device. By December 2010, the hospital reduced CA-UTI rates by 62 percent. The CA-UTI guidelines and a nurse-driven protocol are now applied to all hospital patients.

Similarly, Saint Francis has applied best practice guidelines to decrease the ACS NSQIP reported rates of postoperative pneumonia and to reduce patient time on the ventilator through a bundle of best practices based on ACS recommendations. As a tool for the surgical services improvement program, the guidance from the ACS has provided opportunities to identify and reduce costly HACs in the organization.

Putting data to use

With evidence-based data comes the capacity to promote education and thoughtful research, which can, in turn, improve patient care. As the volume of patients captured in the institution’s ACS NSQIP data set expanded, the University of Connecticut’s surgical training and medical education programs were able to analyze the information for teaching and research purposes. Residents and medical students have presented at national and regional meetings using the hospital’s ACS NSQIP data. Also, use of the data has been a tremendous boon for compliance with the Accreditation Council for Graduate Medical Education core competency requirement.

Further, residents and medical students have learned to critically evaluate disparate data sets on the basis of factors beyond volume alone. The goal has been to motivate young physicians to evaluate outcomes beyond the p value and to become adept at developing quality improvement (QI) programs to enhance patient care.

ACS NSQIP’s greatest strength is that it fosters the partnership between the surgical clinical reviewer (SCR) and the surgeon champion. The SCR is on the frontline of data collection. He or she has access to the patient records and must intelligently use standardized ACS definitions to accurately record more than 100 perioperative variables into an automated system. Saint Francis’ SCR has engendered trust among surgeons and patients, enabling the institution to acquire 30-day outcomes data through office visits, telephone calls, and patient questionnaires. Saint Francis’ SCR’s data capture rate has been greater than 99 percent for the last three and one-half years.

The SCR is a valuable part of the performance
improvement team, with the ability to comb raw ACS NSQIP data to quickly identify developing trends. These movements are discussed with the surgeon champion and brought to the attention of the chair of surgery for expedited review. A thorough drill down of the data is executed with a plan of action to mitigate further postoperative complications.

The SCR and surgeon champion lead the monthly multidisciplinary performance improvement committee meetings. These meetings are well attended by the section chiefs, chairs of surgery, chair of anesthesia, chief nursing officer, and frontline perioperative personnel, who discuss strategies for acting on ACS NSQIP data. Ultimately, the important quality recommendations that emerge from these meetings are formally presented to the board of directors’ quality committee and to the chief executive office to engage senior administration. The administration has supported these efforts, providing further resources and funding for ACS NSQIP in the organization.

Finally, the successful quality improvements strategies that have been implemented in response to the ACS NSQIP data have been presented to insurers, such as Cigna, Aetna, United Health Care, and WellPoint. These payors have demonstrated genuine interest in partnering with Saint Francis to develop quality improvement programs.

Moving ahead

With nearly 5,000 patients in its ACS NSQIP database, Saint Francis has been able to fine-tune its quality programs. Within the last year, Saint Francis has used ACS NSQIP data and tools to become a leader in promoting patient safety. Saint Francis recently received a grant to use ACS NSQIP to study surgical team training and use of the Association of PeriOperative Registered Nurses’ comprehensive surgical checklist. Pre- and post-intervention outcomes were statistically analyzed comparing the institution’s ACS NSQIP data. Results from this study using ACS NSQIP 30-day postoperative morbidity outcomes support the use of surgical team training and the AORN surgical checklist.

This pilot project was an asset in changing the embedded culture within the operating rooms. Surgical staff became more engaged in participating in the Universal Protocol™ for surgical patient safety. Operating room personnel were empowered to speak up on behalf of the safety of the patient, despite several years of an entrenched authority gradient that existed within the perioperative setting. Without the data from ACS NSQIP, it would have been far more challenging to garner support from the surgeons, anesthesiologists, nurses, administrators, and surgical staff.

Currently, Saint Francis is collaborating with a majority of Connecticut hospitals to become more transparent with its ACS NSQIP data so as to better inform patients, health care providers, legislators, and payors about the robust surgical quality improvement programs in the state. Through a collegial framework and a data-sharing agreement, the goal is for Connecticut hospitals to work collectively to make surgical patient care safer. ACS NSQIP will be an important part of this effort.

Dr. Ellner is director of surgical quality, Saint Francis Hospital and Medical Center, Hartford, CT; an assistant professor of surgery at the University of Connecticut; and a senior fellow with the Health Research Educational Trust. He is a 2011 Initiate of the College.
Editor’s note: The following article is based on the Ethics and Philosophy Lecture presented at last year’s Clinical Congress in Washington, DC.

The term “race” has been used loosely throughout history in many fields. Anthropologists, however, since 1996, have acknowledged that the term race should not be used to describe human populations.1,2 The term is, in fact, a social construct that holds no true medical significance. Often, it is mistakenly used interchangeably with other terms, including “ethnicity.” Begley stated that “…race represents a uniform, closely inbred group…” and that “…these conditions are never realized in human types and impossible in large populations.”2 Why, then, is the term race widely used in medicine? The U.S. Census Bureau even recognizes that the categories of race “are sociopolitical constructs and should not be interpreted as being scientific or anthropological in nature.”3 If this term holds no true relevance, its use should be eliminated in science and medicine. In this article, the authors delineate the problem posed by the use of the term race in science and medicine by describing a brief history behind the use of the term, its contribution to health disparities, how it compares to the terms ethnicity and “culture,” and some of the current uses of the term race.

The question about whether race plays a role in science and medicine is relevant to all physicians because more attention is now being directed at eliminating health disparities. Current research efforts are aimed at iden-
tifying where the disparities lie and how they can be diminished. Data gathered from such research can be applied to help mold the U.S.' changing health care system.

From a financial perspective, this topic is important because of outcomes-based reimbursement. If certain population groups—for example, those with limited access to health care—have poorer outcomes than their counterparts, how will this impact the financial reimbursement for those physicians dedicated to caring for these populations? Will they be punished for their humanitarian efforts and receive reduced financial reimbursement? The implications of this issue are remarkably significant and will affect present and future generations of surgeons. If physicians and surgeons are reimbursed less because they choose to tend to a population with poorer outcomes, this may create a culture among young surgeons that will cause them to shy away from caring for those groups. This attitude will lead to frightening consequences. Reimbursement dependent on patient outcome will affect those patients who have poorer baseline outcomes compared with others. Since their outcomes will be poorer than others, those doctors will inevitably receive less financial reimbursement. Will this not disincentivize those physicians? It is important, therefore, to identify a clear system that outlines what the health disparities are and what population groups they impact. It is imperative that health care reimbursement allow for equity for all classes of patients and that it keep pace with the changing dynamics of the population. This process must occur without disincentivizing physicians and surgeons for having the courage to care for patients with finite access to health care, and thus, poorer health outcomes.

**Historical perspective**

Systems have been used since the beginning of time to classify human beings into subgroups. The world's population was first described in biblical scriptures. Genesis, Chapter 10 of the Hebrew Bible, describes all flood survivors as descendants of Noah's three sons, Ham, Japheth, and Shem, demonstrating one of the first human subdivisions after creation.²

In 1758, Carl von Linnaeus, the Swedish taxonomist, categorized humans into four main groups, based on his own physical and psychological view, in *Systema Naturae*.² These four groups included Europeans, Americans, Asians, and Africans. Each group had distinct descriptions based on his impression of each of the populations. Europeans were “fair...gentle, acute, inventive...governed by laws.” Americans were “copper-coloured...obstinate, content free...regulated by customs.” Asians were described as “sooty, severe, haughty, covetous...governed by opinions.” And Africans were described as “black...crafty, indolent, negligent...governed by caprice.”² Linnaeus' classification of humans had no biological basis, but instead were characterized primarily by physique and stereotype. Linnaeus' position supports the idea that race is a socially constructed word, and racial subcategories are historical in nature and do not naturally or organically occur or exist.

The “father of anthropology” and the first to use the term race was Johann Friedrich Blumenbach, who published the first of three editions of his thesis *De generis humani varietate nativa (On the Natural Variety of Mankind)* in 1775. Blumenbach first defined the varieties of humans based on geographic terms, and in his third edition, he characterized the five varieties of humans based on scientific methods that included the examination of skulls, fetuses, hair, anatomical preparations, and pictures and drawings.² Based on his scientific findings, he described five generic varieties to be the Caucasians, Mongolians, Ethiopians, Americans, and Malays. Although Blumenbach classified human beings into these five categories, he emphasized that there was not, in fact, a clear subdivision of the human species but that “varieties...run into one another by insensible degrees.”² Although Blumenbach described his theories and classification system based solely on scientific evidence, he did profess his own bias on beauty when he described the Caucasian skull of the Georgian female as “the most handsome and becoming.”² This bias, however, did not represent any color prejudice because Blumenbach argued that Ethiopians were not inferior to other races. He also wrote favorably about “negroes,” commenting on their beauty, abilities, and accomplishments. He owed the differences between groups to variations in opportunity, which was a viewpoint out of line with his time.

The most influential biological race theory was the One Drop Rule that was established in the 1600s and accepted by most Americans in the 1920s.² This rule identifies an individual as African American if they have one African-American ancestor. There has been no other group of individuals throughout U.S. history to have such a rule. This race theory has no established evolutionary or genetic basis and was solely constructed to establish race.
The negative connotations of racism continued into the 1940s and were demonstrated by the notable Clark Doll Experiments in 1954 entitled, “Psychological effects of segregation on black children.” In this study, psychologist Kenneth Clark helped prove the case for the Brown v Board of Education Supreme Court case. Children were given both white and black dolls and asked which was the better doll. Both groups of children picked the white doll, leading Dr. Clark to conclude that prejudice, discrimination, and segregation caused black children to develop a sense of inferiority and self-hatred. A 17-year-old film student, Kiri Davis, reproduced the study in a 2005 documentary entitled A Girl Like Me, and again found that both groups of children, white and black, stated that the white doll was “good and pretty” and the black doll was “bad.” This demonstrates that more than 50 years later, the sense of inferiority continues.

The Human Genome Project, completed in 2000, further supported the anthropologists’ statement in 1996 that there was no such thing as race. Other influences in the last decade that have sparked interest in the use of race in medicine are the use of pharmacogenetics in personalized medicine and the FDA-approved drug BiDil, which has been marketed exclusively for the “self-identified” black population.

The variations that exist with respect to prevalence of disease among human subpopulations, which are a result of geographic origins and migratory patterns, may be partly accounted for by differences in their genomic sequences. Genetics research has now identified that allele frequencies are, in fact, continuous; thus, we cannot account for a point at which one race begins and another ends.9

**Health disparities**

Today in America, minority populations face a disparity in access to, and quality of, the health care they receive in comparison with their non-Hispanic, Caucasian counterparts. For most of this nation's history, as the Kaiser Family Foundation noted in a 2005 brief, “few would disagree that [...] race was a major factor in determining if you got care, where that care was obtained, and the quality of medical care.”10

The influence of this notion of race, unfortunately, still persists and is evident in scientific writings that demonstrate differences in health outcomes across population groups. Some of these alarming differences include African Americans having 40 percent higher mortality rates from heart disease, Hispanics being almost twice as likely to die from diabetes than non-Hispanic whites, African-American infants being more than twice as likely to die than non-Hispanic Caucasian babies, and Hispanics being three times as likely as non-Hispanic Caucasians to die of HIV/AIDS.11

The differences across groups are not limited to differences in outcomes and disease prevalence, but also include differences in treatment. In 2003, the Institute of Medicine found that African Americans were less likely than their Caucasian counterparts to receive appropriate cardiac medication or to undergo coronary bypass surgery, were less likely to receive peritoneal dialysis and kidney transplantation, and were more likely to receive a lower quality of basic clinical services, even when variations in such factors as insurance status, income, age, comorbid conditions, and symptom expression were taken into account.12 These findings have not changed drastically since then. Presumptions of the notion of race have continued to impact health status.

An example of its continued impact can be seen in a study done by Prus and colleagues in 2010, which compared the health status of immigrants in the U.S. to those in Canada.13 The study suggested that native and foreign-born ethnic minorities 45–64 years of age in the U.S. have lower health outcomes, regardless of socio-demographic status, socioeconomic status (SES), health insurance status, and lifestyle. Deep-seated racism was determined to be the most important variable accounting for these differences. Ethnic minorities in the U.S. are simply more likely to experience discrimination, marginalization, poverty, and joblessness than ethnic minorities in Canada.15

Racism, however, as strong a factor as it has been in the formation of health disparities, has not been the sole proponent of them. Health disparities have developed from myriad interactions between a seemingly endless array of variables, from social and economic barriers, differences in cultural beliefs, and individual values, to dissimilar environmental exposures, poverty, and genetics.

It is not surprising that some individuals, like Harold P. Freeman, MD, believe certain variables to have played larger roles in the creation of today’s current health disparities than others. In 2003, Freeman argued that poverty has been the major determinant of health disparities.9 Poverty, he states, “is associated with a lack of resources, information, and
knowledge; substandard living conditions; very often, a risk promoting lifestyle; and diminished access to health care.” However, the misuse of race in science and medicine, as well as society, for that matter, often encompasses such factors as poverty. Race, according to Dr. Freeman, often serves as a proxy not just for poverty, but also for “class, education, discriminatory experiences, and certain behaviors, among other factors.”

**Culture and ethnicity**

It is important to define culture and ethnicity, two terms often used interchangeably with race, while all three are unique and separate entities. Culture, as defined by the American College Dictionary, is “the totality of socially transmitted behavior patterns, arts, beliefs, institutions, and all other products of human work and thoughts.”14 The word’s use is often meant to denote a shared communication system, similarities in physical and social environment, beliefs, values, traditions, worldview, lifestyle attitudes, and behaviors. Many cultures can exist within any so-called racial or ethnic group.

Ethnicity, on the other hand, is often defined as the state of belonging to a social group that has a common national tradition. Members of an ethnic group are often believed to share common genealogy or ancestry. Ethnic groups are usually united by certain common cultural, behavioral, linguistic, and ritualistic or religious traits. In this sense, ethnic groups, such as Hispanic, Asian, African American, and Caucasian, are cultural communities.

With these terms defined, it important to point out that the concepts of ethnicity and race are often used to create subdivisions within given populations. These subdivisions are often called “subpopulations.” West-Indian, Irish, and East-Indian Americans are examples of subpopulations. While individuals within these subpopulations often share similarities, it is important to realize that all individuals within a given subpopulation are not the same; “there is no single Black culture, just as there is no single White, Hispanic, or Asian culture.”15 This article will refer to the Hispanic/Latino ethnic group (due to the fact that it is the largest minority group in the U.S.) to further elucidate this concept and shed light on the notion that Spanish-speaking individuals should be categorized by their country of origin.

Coined by the U.S. Census Bureau in 1970, the term “Hispanic” is often used to describe people of Spanish-speaking origin.16 The term is often used as an umbrella for Spanish-speaking groups of individuals, from Mexicans to Peruvians. It is not, however, a term that originated from within the Latino/Spanish culture.16 The term’s use has been primarily by people who have been raised and educated in the U.S., as they are more accustomed to the term by education or family custom, while Latin nationals and recent immigrants to the U.S. typically do not self-identify as Hispanic.16 The term “Latino,” on the other hand, is a term that is often used interchangeably with the term Hispanic; it is used to refer to people of Latin American descent, as distinct from Spanish descent (people originating from Spain).16 Nevertheless, using the terms Hispanic or Latino in science and medicine is incorrect.

**Current use of the term race**

Censuses, databases, and hospital records often misuse the term race when collecting information on large groups of people, which is unfortunate, considering the fact that this data serves as a good source of information regarding the morbidity and mortality rates in particular populations.17 An example of the importance of this is in the field of public health. Information about health across populations is critical in order to adjust health policy based on the increased risk for morbidity and mortality for those particular populations.

A drawback to the system currently in place is that there is not complete congruency in the terms used; there are different classification systems employed across the various fields. There is not a standard classification system used across all these databases, therefore it is difficult to accurately assess this information. Individuals who are included in a particular group in one survey may be included in a different group in another survey.

Another drawback to the current classification system had to do with the fact that most of the systems rely on self-identification by the individual. This reliance poses a problem because many factors can affect how individuals self-identify and can raise important questions, including the following: If a person is of multiple races, does their upbringing, more than genetics, affect how they self-identify? If they were raised in a household with individuals from only one of their races, will these individuals only self-identify with that one side or will they acknowledge both? Or if an individual is biracial, but has the physical...
characteristics associated more with one race, do they only self-identify with that race?

**Use in epidemiology**

When describing disease patterns across the population, it is important to be aware of the higher prevalence of certain conditions in specific population groups. An advantage of grouping individuals is that one can easily identify what individuals are at increased risk for certain conditions. The benefit of this is clear; provided this information, physicians can perform screening tests to determine the disease status of the person and, possibly, treat prophylactically to prevent the complications of some of these conditions.

While it is necessary to somehow delineate the population characteristics and identify those individuals who are at increased risk, categorizing them by race is not appropriate or helpful.

Another drawback about this grouping system is that health care providers may mistakenly use the information about disease prevalence. A person’s physical appearance may affect the physician’s assessment of the patient. Bonham and Knerr found that “health care providers may also unknowingly interpret symptoms differently based on the race and ethnicity of the patient, arriving at different clinical decisions and making different treatment recommendations.” This practice could prove to be harmful if a life-threatening diagnosis is missed. While physicians should keep in mind that certain conditions are more prevalent in some populations, such conditions should not be ruled out or ignored simply because of the patient’s apparent ethnic background.

**Use in research**

A classification system is necessary in medical research in order to collect information on differences in outcomes across population groups, if they do, in fact, exist. Clive O. Callender, MD, FACS, coauthor of this lecture, and colleagues found that there are differences among ethnic groups in organ donation. They concluded that organs donated from African Americans were only associated with higher relative risk for African-American and Caucasian recipients, but not for Hispanic, Asian, or other ethnic minority recipients. Such information is essential when it comes to surgical decision making. It is important to collect such data in order to accurately assess the risk associated with outcomes across population groups.

Moreover, with the wave of eliminating health disparities in full force, it is extremely important that there be an accurate system in place to highlight where the disparities lie and what the barriers are for equality in care.

The problem with the use of race in research lies in the fact that humans cannot be structured into geographical races on the basis on genetic variation. Keita and colleagues reported:
Modern human genetic variation does not structure into phylogenetic subspecies (geographical “races”), nor do the taxa from the most common racial subclassifications of classical anthropology qualify as “races.” The social or ethnoancestral groups of the U.S. and Latin America are not “races,” and it has not been demonstrated that any human breeding population is sufficiently divergent to be taxonomically recognized by the standards of modern molecular systematics.9

Although a system is necessary, the system currently used in many research settings is not correct or appropriate.

Conclusions and recommendations

It is not a novel concept that health disparities pose a serious problem in health care. Recently, much attention has been focused on eliminating these disparities and providing equity in health care for patients. With the changing climate in health care, it is essential to highlight those issues that contribute to health disparities in order to target and efface them. The misuse of the term race in science and medicine is one such issue. By misclassifying individuals into nonexistent racial groups, the negative connotations associated with these terms will continue to thrive. These must be eliminated to aid health care professionals in the battle to overcome health disparities.

Although throughout history classification systems have been in place to categorize individuals based on a variety of criteria, the U.S. population cannot be structured into racial groups because the term race does not exist as a biological term. The argument that there should be a classification system is valid. A classification scheme is needed in order to manage an efficient health care system. There are differences in disease prevalence, progression, and outcome across population groups. This concept has been established repeatedly in the scientific literature. Rather than investigating the impact of a person’s race on disease processes, research should focus on the impact of environmental and genetic variance on disease processes. When designing treatment plans for patients, the specific ancestral histories of individuals should be considered during group studies.

In 1997, Raj Bhopal published recommendations that parallel ours and deserve mentioning; he reported that race is not ethnicity and should not be used synonymously or interchangeably.20 Ethnicity is a multifaceted and fluid term and reports that classify ethnic groups should explicitly state how the classifications were identified. It was also mentioned that it is important to recognize the potential for personal influences by investigators, including ethnocentricity. This study cautioned investigators when generalizing results based on ethnicity, due to the fluid and dynamic nature of the term ethnicity. The recommendations included an assessment of environmental, lifestyle, cultural, and genetic influences when there are variations in disease.

The Institute of Medicine to the National Institutes of Health and the Office of Management and Budget recommend that the term race be replaced with ethnicity in all scientific writings and publications.21 Future research and censuses should properly address ethnicity, culture, genetics, subpopulations, and SES. Figures 1 and 2, page 16, demonstrate the impact of discourse on this topic. They illustrate the changes of attitudes of an audience following a presentation.
on the subject at the 96th American College of Surgeons Clinical Congress in Washington, DC. The authors of this article are of the position that with the proper communication of the recommendations, physicians, scientists, and researchers will agree and act accordingly.

It is important for the medical profession to acknowledge that current race-associated differences are suggestive of other factors, namely differences in ethnicity, culture, genetics, SES, and so on. The term race is a social construct and should not be considered a biologic determinant with reference to science and medicine. As such, the term ethnicity should be used in place of race in all medical and scientific writings. The fact remains that we are all one race—the human race.

References

For many physicians, patients, and patients’ families, one of the most difficult topics to broach is the possibility that a condition is so advanced or so severe that an operation and other invasive treatments aimed at curing illness are no longer viable options. Discussions about end-of-life care can be particularly problematic for surgeons, who traditionally have seen themselves as physicians who rid patients of disease, and then move on. However, because more patients are experiencing life-limiting conditions, conversations about palliative care are becoming increasingly common, and so is the need for patients to work with trusted health care professionals who can help them to achieve a comfortable and dignified end of life.

In keeping with its mission of patient advocacy, the American College of Surgeons (ACS) has taken steps in recent years to train surgeons in the safe, effective, and compassionate delivery of palliative care. Examples include forming panels to examine the issues involved, releasing statements on end-of-life care, presenting and cosponsoring symposia on the subject, and publishing educational materials for use in surgical training programs. New programs for practicing surgeons and centered on palliative care’s role in the quality movement also are under way.
Understanding palliative care

The advances in medicine and surgery that have occurred in the last 50 years have profoundly changed the way Americans live and die. People are living longer, and many conditions that previously were difficult to treat, such as acute coronary occlusion, are now managed more easily. As sudden death among people in their 50s and 60s has become less frequent and life spans have expanded, the population of patients with chronic, debilitating conditions—such as congestive heart failure, certain types of cancer, stroke, and dementia—has swelled. Most of these diseases are incurable, and each is likely to cause patients and their families significant anguish, particularly in the late stages. Consequently, the need for palliative care has risen.1

The World Health Organization (WHO) defines palliative care as “the active total care of patients whose disease is not responsive to curative treatment.” “Total care” can be understood as the caring response to the four domains of human pain and suffering—physical, emotional, socioeconomic, and spiritual.2 It’s about looking at how a patient is living and functioning with standard treatment and then communicating with the patient and his or her loved ones about how to proceed, according to Peter Dixon, MD, a hematologist and oncologist in Essex, CT.

“At the heart of palliative care is the agreement between physician and patient that the expected outcome is relief from distressing symptoms, easing of pain, and improvement in quality of life,” wrote Geoffrey Dunn, MD, FACS, in the April 2004 issue of the Bulletin.2 Dr. Dunn is Chair of the College’s Surgical Palliative Care Task Force, which is staffed by the ACS Division of Education.

Studies show that palliative care is what most patients want near the end of life. More specifically, these patients say they want the following: (1) to have pain and symptom relief; (2) to avoid inappropriate prolongation of the dying process; (3) to have a sense of control; (4) to relieve the burdens on their families; and (5) to strengthen their relationships with their loved ones. Their families say they expect the following: (1) to have the patient’s wishes honored; (2) to be included in the decision-making process; (3) to have access to support systems and assistance with patient transport, medications, equipment, and so forth; (4) to be given honest information that is handled confidentially; and (5) to be contacted when the patient dies.3

“The right thing is for patients and patients’ families to have the experience at the end of life be what they want it to be,” said Andy Baxter, founder of the Cunniff-Dixon Foundation, which he established in honor of his wife, Carley Cunniff, and Dr. Dixon, who cared for her during a protracted battle with metastatic breast cancer. Cunniff-Dixon is dedicated to educating physicians about palliative care.

“Carley died the kind of death I think we’d all like to experience,” Mr. Baxter added. “She died peacefully and comfortably at home and surrounded by friends and family.”

Ms. Cunniff’s experience, however, is hardly the norm. “That’s something I recognized as an oncologist early in my career,” said David Weissman, MD, FACP, director of the Palliative Medicine Program at the Medical College of Wisconsin, Milwaukee. “I saw an enormous amount of families suffering because of the inability of the clinician to do this well.”

Surgeon involvement necessary

Furthermore, surgeons historically have viewed palliative care as an area that falls outside their domain. “The responsibility for providing end-of-life care has typically fallen on internal medicine and family practice physicians,” Dr. Dixon observed. However, as medical and surgical practices have become more specialized, the construct of the family practitioner who does everything from prenatal care to end-of-life care has eroded, Dr. Weissman added, and other clinicians need to get involved.

Because surgeons often see some of the sickest patients, they are likely to be among the first physicians to discuss a poor prognosis. “Surgeons are in this arena all the time. We see it with critical and life-limiting illness, so it behooves us to focus on [palliative care],” said Dr. Dunn, a general surgeon in Erie, PA. “It really is about non-abandonment of our patients after a prognosis is made.”

“I think it’s about recognition of our own limitations and of the needs of patients,” added Robert Milch, MD, FACS, one of the founding fathers of the College’s palliative care initiative. Thomas R. Russell, MD, FACS, former Executive Director of the ACS, agreed, saying, “You do what you can when you have the opportunity, but when a condition has advanced beyond what we can realistically take care of, we need to be available to offer support and comfort.”
Some surgeons consider it a privilege to be able to serve people with life-threatening conditions. “I think palliative care harkens to the best things about being a surgeon,” Dr. Milch said. “We’re meant to give counsel and solace to our patients.”

Surgeons usually provide this care as part of multidisciplinary teams. “Everything about palliative care is about forming alliances between health care professional, patients, and patients’ families,” said Robert Martensen, MD, PhD, senior advisor to the Cunniff-Dixon Foundation.

As the leaders of these teams, surgeons need to encourage other health care professionals in their institutions to learn about palliative care. “Surgeons, more so than other physicians, control hospitals. If surgeons in a community hospital or an academic medical center say, ‘We are rethinking how we approach patients who are near the end of life,’ that can have a huge impact because of the position of surgery in hospitals,” Dr. Martensen said.

Nonetheless, some surgeons still are uncomfortable with the concept of palliative care. Many physicians feel they lack the interpersonal skills needed to address the strong emotions that discussions about palliative care may evoke.4

“In order to engage with these problems, you have to know where your own buttons are,” Dr. Dunn said. “You have to be comfortable with at least some degree of introspection, and for some surgeons, that may be in conflict with their self-image.”

Many surgeons struggle with palliative care because they are trained to hold themselves accountable for their patients’ outcomes. They “view disease as an implacable enemy” and progressive disability or death as defeat.4

Others, including older surgeons and surgical oncologists, “may feel that showing interest in this area is sending the wrong message,” Dr. Dunn noted. “They’ll say, ‘We don’t want to take away our patients’ hope.’”

Furthermore, Americans in general avoid talking about death and dying. “We have a death-denying public and a death-defying physician community,” Dr. Milch said. “The public needs to be educated so that they feel less threatened by this topic,” Dr. Dunn added.

Some surgeons may be reluctant to raise the possibility of palliative care for more practical reasons. The Medicare program, which directs a considerable portion of its funds to patients who are in the last year of life, offers “no reimbursement scheme for taking the time to talk with patients about end-of-life care,” Dr. Martensen said. “The incentives are not aligned with this approach.”

**Professional recognition**

The accrediting bodies for physicians in practice and in training recognize the growing need for health care professionals to become more educated about the benefits of palliation and have taken steps in this direction.

The American Board of Medical Specialties (ABMS) unanimously approved palliative care as a subspecialty in 2006, the same year the Accreditation Council for Graduate Medical Education (ACGME) voted to begin accrediting hospice and palliative medicine fellowship programs.6 ABMS approval afforded palliative care all of the rights and privileges of other subspecialty training pathways.

The ABMS chose to recognize palliative care as a subspecialty after being petitioned by a number of organizations and individuals, according to Frank Lewis, MD, FACS, executive director of the American Board of Surgery (ABS). “It was different from most specialties in that it blurred the line between various specialties,” he said. “Internal medicine and family medicine probably had the most people [focusing on palliative care], but seven or eight other specialties had people doing it. So, it was decided that palliative care would have a conjoint board.”

In addition to the ABS, the nine other specialties that sponsor board certification in palliative medicine are anesthesiology, emergency medicine, family medicine, internal medicine, pediatrics, physical medicine and rehabilitation, psychiatry and neurology, radiology, and obstetrics and gynecology.

“Right now surgery has about 18 people certified in [palliative care],” which is more than the ABS anticipated five or six years ago, Dr. Lewis said.

Physicians who focused on providing end-of-life care previously were certified by the American Board of Hospice and Palliative Medicine (ABHPM). Surgeons with ABHPM certification have until 2012 to take the ABMS-approved exam, which is administered every two years. As of the beginning of this year, surgeons just entering the profession who want palliative medicine board certification must complete an ACGME-approved fellowship.7

In addition, the ABS certification exam currently continued on page 23
## ACS Surgical Palliative Care Task Force

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comprises several questions about palliative care. “It’s not a central focus of what we do, but we think it’s important, and so it’s part of the topics that we cover,” Dr. Lewis said.

Although palliative care is not yet included in the ABS’ core competencies that surgeons must demonstrate for Maintenance of Certification, Dr. Lewis anticipates that as more surgeons make hospice and palliative care the focus their practices, “We will need to develop indicators to measure and evaluate what they do.”

ACS task force

The ACS also has acknowledged the need for surgeons to become educated about palliative care. The late Olga Jonasson, MD, FACS, was a driving force behind the College’s involvement in this area when she was Director of Education and Surgical Services from 1993 to 2004, according to Dr. Milch. She, Dr. Milch, and Dr. Dunn were founding members of the Surgeons Palliative Care Workgroup in the mid-1990s.

Setting the wheels in motion for the College to further explore the issue was Thomas J. Krizek, MD, FACS, who moderated a colloquium on ethics, physician-assisted suicide, and end-of-life care at the 1997 Clinical Congress, in Chicago IL. In February 1998, the ACS Board of Regents approved the Committee on Ethics’ statement, Principles Guiding Care at the End of Life.8

In October 2002, the Surgeons Palliative Care Workgroup held its last meeting, and the Surgical Palliative Care Task Force was organized under the aegis of the ACS Division of Education. The purpose of the task force is to facilitate introduction of the precepts and techniques of palliative care to surgical practice and education by bringing together surgeons with demonstrated interest in palliative care and, in so doing, to act as a catalyst for change.9

In October 2003, the task force published its Recommendations to the Field Summary with the support of the Robert Wood Johnson Foundation.4 In the past nine years, this task force also has been responsible for the continued development of educational programs and spearheaded the publication of a series of articles in the Journal of the American College of Surgeons. In addition, the task force revised the Statement on Principles Guiding Care at the End of Life, with the Regents’ approval, in 2004.

Reaching the residents

In 2007, the ACS Surgical Palliative Care Task Force formed a collaborative relationship with the Cunniff-Dixon Foundation to develop educational materials on end-of-life care. This relationship developed when Edward M. Copeland III, MD, FACS, then President of the ACS, participated in a symposium—The Art of Medicine at the End of Life—at the University Club in New York, NY. Cunniff-Dixon sponsored the session in conjunction with the University of South Florida Health and the H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL.10

Dr. Copeland recognized the need for surgeons to become better educated about how to provide appropriate care to patients with life-threatening illnesses and believed that the ACS should take the lead in this effort. Before the symposium, he contacted Linn Meyer, then-Director of the ACS Division of Integrated Communications, to seek assistance in getting the word out to Fellows about the meeting through the College’s various communications vehicles. Following the symposium, Ms. Meyer arranged for publication of a special issue of the Bulletin focusing on content presented at the meeting. Subsequently, Mr. Baxter and Dr. Martensen requested a meeting with Dr. Russell and Ms. Meyer, to discuss how the two groups could work together.

The first product of this relationship was Surgical Palliative Care: A Resident’s Guide, published at the end of 2009. This manual, available in both print and Web editions (http://www.facs.org/palliativecare/surgicalpalliativecareresidents.pdf), is designed for all surgical residents. It serves as a guide to the salient issues in palliative care, including the following: developing personal awareness, self-care, and the surgeon-patient relationship; managing common conditions, such as pain, dyspnea, delirium, depression, nausea, constipation, malignant bowel obstruction, and wasting syndromes; delivering bad news; addressing cultural and spiritual issues; discussing the do not resuscitate order; and caring for patients in the final days of life.3

According to Dr. Dunn, Editor-in-Chief, Surgical Palliative Care: A Resident’s Guide “is designed to encourage ongoing discussion, experimentation, and exploration of these various content areas.” It serves as a framework on which training programs can design their own palliative care training curriculum. “Every surgical program has its own culture. They
all have their own traditions, their own strengths and weaknesses. We believe this [program] is flexible enough to accommodate a wide variety of ways of introducing it into their curriculums,” Dr. Dunn added. For example, “some training programs have retreats, where the residents go through the whole manual in hopes of sparking future interest and inquiry,” he said. Others try to work it into grand rounds and other conferences.

The blueprint for the surgical residents’ guidebook was Palliative Care: A Resource Guide for Physician Education, 4th Edition, by Dr. Weissman, Associate Editor for the College’s surgical residents’ guide; Bruce Ambuel, PhD; and James Hallenbeck, MD. “All of the chapters were reviewed for updating for a surgical audience, and new chapters were added specifically for surgeons. There was considerable rewriting of some chapters, but the overall structure remained pretty much the same,” Dr. Weissman said.

Letters and copies of the book were sent to all surgical training centers in the U.S. and Canada, announcing the manual’s release and offering suggestions regarding its uses. Information about the utility of the guidebook spread, and as of press time, more than 1,405 copies of the manual had been sent to training programs and interested individuals and institutions after the initial dissemination period, according to records kept by the ACS Division of Integrated Communications.

The ACS chose to target its educational activities in palliative care toward residents for a number of reasons. “I felt it was important to reach the residents because they’re seeing a lot of things for the first time, so they are very much able to be educated and informed about issues in surgery,” Dr. Russell said. “Older surgeons have seen these situations before and have had to deal with them before, and so their minds may be made up about how to handle them, but residents are getting their first
real exposure to these cases.” Indeed, surgical residents frequently encounter patients with terminal or incurable conditions, and each trainee witnesses an average of 28 patient deaths annually.11

Another reason the ACS decided to start with the resident population is because surgeons often develop their practice habits while in training. “It was during residency that I formed my ideas about what great surgeons were, what bad surgeons were,” Dr. Dunn said. “Because end-of-life care requires the same amount of planning, gentleness, skill, and attentiveness as doing an actual operation,” residents need to be trained to provide these services in much the same way as they learn how to operate. “It’s not something you can learn through a videotape. You really have to do it with someone who has done it before and who does it well,” he added.

Furthermore, it’s the current residents who will be providing most of the care to surgical patients in the coming years, Dr. Russell said. “They need this training now to prepare for the patient of the future.

By encouraging and enabling program directors to seamlessly incorporate training in palliative care into their residents’ schedules, the curriculum responds to the time challenges that many residents face. “When you’re a surgical resident sometimes you’re pulled to the point of distraction. It’s very hard to take advantage of all of the resources that are available,” said Ciarin T. Bradley, MD, chief surgical resident at the Medical College of Wisconsin, Milwaukee.

Dr. Bradley, a contributing author for the manual, noted that his training institution has dedicated a blocked period of time to the curriculum. “The goal is to show surgical residents that palliative care is not just one additional subject they need to learn, but that it’s a practice style that can be helpful in dealing with different aspects of the surgical patient,” he explained. “I plan to go into the practice of surgical oncology, so a lot of my patients will likely be faced with life-threatening illnesses and serious diagnoses. I think all of the skills and knowledge that the manual provides will be helpful in dealing with patients, setting goals, choosing appropriate care plans, dealing with complications as they arise, and caring for patients in general.”

Dr. Bradley’s view about the broad uses of the manual is precisely what the originators of the book sought to convey. “What we at the College want to do is to make sure that surgeons are educated and informed so they can be active participants in the teams that make the decisions about whether to offer palliative care or invasive interventions for purposes of extending lives,” Dr. Russell said.

At press time, the Surgical Council on Resident Education (SCORE) was planning to post Palliative Care: A Residents’ Guide on its website (http://www.surgicalcore.org) to make the curriculum more accessible. SCORE is a not-for-profit consortium of the following organizations: the ABS, the ACS, the American Surgical Association, the Association of Program Directors in Surgery, the Association for Surgical Education, the Residency Review Committee of the ACGME, and the Society of American Gastrointestinal and Endoscopic Surgeons.

“This is the first formal educational offering in palliative care that program directors can use to the benefit of surgical patients,” said David B. Hoyt, Executive Director of the ACS, who, like Dr. Russell, is a strong supporter of this effort. “It fills a void—a gap—in care that has been left to intuitive ability in the past. We feel privileged to be able to offer this program as a means of offering optimal care to surgical patients needing palliative care, and we greatly appreciate the assistance from Andy Baxter and the Cunniff-Dixon Foundation to bring this program to fruition.”

Looking ahead

The next project on the agenda for the ACS Surgical Palliative Care Task Force and Cunniff-Dixon is to develop a “train-the-trainer” program in conjunction with Ajit K. Sachdeva, MD, FACS, Director of the College’s Division of Education. The program would be designed to prepare residency directors and other surgical educators to use the curriculum in their institutions. “I think that the goal ought to be to identify surgical champions for palliative care who are given the impetus they need to become effective trainers in this area,” Dr. Bradley said. “A lot of surgeons have interest in this area but [they] just don’t have the time or the support to explore it.”

Eventually, it is anticipated that most surgeons and other health care professionals who provide surgical care to patients with life-threatening illness will get some training in palliative care. The program is for the ACS to “embrace palliative care the way it developed its training programs in Advanced Trauma Life Support® (ATLS®),” Dr. Martensen said, with a curriculum similar in scope to that of ATLS certificate programs.
The task force also intends to start measuring outcomes in palliative care. These studies may evaluate such core issues as pain control, family satisfaction, quality of life, use of resources, and so on, Dr. Dunn said. He said that several of the young surgeons who were recently appointed to the task force have shown an interest in pursuing this type of research and may be invaluable in leading this charge.

Dr. Hoyt sees a tie-in between this endeavor and the College's Inspiring Quality: Highest Standards, Better Outcomes program. “Competency in palliative care is part of contemporary surgery and fits well with ACS initiatives in quality and surgical education,” he explained.

Indeed, some physicians would argue that the skills and techniques used in providing palliative care can be applied to all patients and in all settings—that it’s a matter of “good doctoring.” “This is why [palliative care has] become an important issue for surgeons. We’re not just talking about people in the last days of life, who have generally been associated with hospice care, but we’re talking any patient who needs an operation—and not just cancer patients, but trauma patients, people with cardiovascular illnesses, transplant patients, and so on,” Dr. Dunn said.

One of the much-touted and clinically verifiable means of improving quality of care centers on the provision of coordinated care. “There has been a culture change in surgery to provide more multidisciplinary care to patients globally. It’s become much harder to be a surgeon who only deals with one problem or one condition as opposed to taking care of patients comprehensively,” Dr. Bradley observed. With its emphasis on team-based care, the palliative approach may serve as a model for better coordination.

“I believe that surgeons really can make a very unique contribution to this field. They’re involved in the care of problems that other [health care professionals] are not involved in. They have unique skills that really are invaluable,” Dr. Dunn added. He said that he is excited that the College is continuing to cultivate those talents and abilities. “I think we’ll all be better off. It will make surgical practice more rewarding, and it will certainly benefit our patients.”

References

Ms. Schneidman is Manager of Special Projects, Division of Integrated Communications, Chicago, IL.
ACCOUNTABLE CARE ORGANIZATIONS:

A primer for surgeons

by Ingrid Ganske, MD, MPA;
Megan M. Abbott, MD, MPH;
and John Meara, MD, DMD, FACS
Accountable care organizations (ACOs) are part of a host of delivery system reforms included in the Affordable Care Act that are designed to achieve lower costs, improved care, and better health. The Centers for Medicare & Medicaid Services (CMS) released a provisional rule at the end of March to further define and regulate ACOs and, after a brief comment period, CMS is revising the final rules for the establishment of these new organizations beginning January 2012. Meanwhile, the ACO concept has created a stir among physician groups and hospital administrators, who are already starting to assess how and whether to participate. Moreover, substantial flexibility exists in the design of ACOs, and those who are at the drawing board will be able to set priorities and rewards in a way that may reshape the balance of power and authority among involved participants. Given the potential of ACOs to reform the delivery of medical services, it is important for surgeons to learn the fundamentals of ACOs and to engage with emerging ACOs in their local health care communities.

The concept

ACOs were conceived as a way to address excess health care spending that is generated by overuse and inefficiency of care. ACOs as a solution to overspending in health care stems largely from the work of Elliott Fisher, MD, director of the Center for Health Policy Research at Dartmouth Medical School, Hanover, NH. Dr. Fisher has attributed higher health care spending to the greater use of supply-driven discretionary services such as extra primary care visits, specialist consultations, inpatient rather than outpatient services, imaging, procedures, and lab tests. Medicare reimburses these services on a fee-for-service basis, which, according to Dr. Fisher, creates incentives for physicians and hospitals to continually provide (and bill for) as many of these services as are available. However, evidence suggests that higher Medicare spending is associated with lower overall quality scores, and has not been associated with increased patient satisfaction or improvement in health outcomes.

ACOs are intended to incentivize health care providers and hospitals to join together to provide more efficient services, which is expected to decrease overall costs and improve quality of care. An ACO is defined by CMS as an organization of health care providers that agrees to be accountable for the quality, cost, and overall care of assigned Medicare beneficiaries who are enrolled in the traditional fee-for-service program. Physicians and hospitals in ACOs will be eligible to share any savings they generate from care provided to Medicare patients, while working together toward higher quality standards.

CMS requires that ACOs meet specific criteria. Essential elements of accountable care organizations include:

- Physicians, hospitals, and insurers (in various combinations) enter into a legal contract of at least three years, which provides a structure to distribute payments for shared savings amongst its participating providers.
- The core of the ACO is comprised of primary care providers.
- An ACO must care for at least 5,000 patients.
- An ACO must strive to reduce overall health expenditures and improve quality.
- An ACO must report on a number of quality standards, prevention measures, acute care measures, chronic care measures, and resource efficiency measures.

Several types of organizations will be eligible to participate as ACOs, allowing flexibility for existing groups to combine to form ACOs in various arrangements:

- ACO professionals (for example, physicians and hospitals meeting the statutory definition) in group practice arrangements
- Networks of individual practices of ACO professionals
- Partnerships or joint venture arrangements between hospitals and ACO professionals
- Other Medicare providers and suppliers as determined by the Secretary of Health and Human Services

Efficiency is one side of the coin; quality is the other. More efficient, less costly care will be rewarded with a portion of the savings. To improve overall quality of care, ACOs will have to report on quality standards in key areas assessing adherence to best practice guidelines, coordination of care, and patient satisfaction. Quality reporting will serve as a safeguard against generating savings by limiting access to care or rejecting high-cost patients. ACOs will be eligible for shared savings based on their annual cost per

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Medicare beneficiary and their performance on the quality indicators, both measured against historical benchmarks.

**The financial model**

Under the current proposal, Medicare would set a benchmark cost for providing care to the average beneficiary based on an estimate of what expenditures would have been in the absence of the ACO, adjusted for patient characteristics and projected national increase in per capita health care expenditures. For example, this could be $10,000 in the first year and updated annually during the three-year period. Savings generated by an ACO below this threshold would be shared between the ACO and Medicare. As a simplified example, an independent practice association could team up with a local hospital to form an ACO. Physicians and the hospital submit their claims to Medicare and are reimbursed through a fee-for-service payment structure. They also collect and report data on 65 quality measures described at a later point in this article. If the cost of care for a particular patient were only $9,000, then Medicare would share a portion of the $1,000 savings with the ACO, adjusted to reflect the ACO’s compliance with quality standards and a number of modifiers detailed later in this article.

ACOs will be able to choose one of two models of cost-sharing and risk-assumption, depending on their preexisting experience with integrated care delivery. For newly minted organizations, a one-sided risk model allows participation for the first two years without assumption of any financial risk for losses if they exceed the benchmark. This option offers up to 50 percent cost sharing in any savings the ACO generates. The second option is a two-sided risk model,

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### Table 1. Shared savings program

<table>
<thead>
<tr>
<th>Feature</th>
<th>One-sided model</th>
<th>Two-sided model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base sharing rate</td>
<td>Up to 50%, based on quality performance</td>
<td>Up to 60%, based on quality performance</td>
</tr>
<tr>
<td>FQHC/RHC participation incentives</td>
<td>Up to 2.5%</td>
<td>Up to 5%</td>
</tr>
<tr>
<td>Maximum sharing rate</td>
<td>52.5%</td>
<td>65%</td>
</tr>
<tr>
<td>Shared loss rate</td>
<td>1–MSR (ranging 47.5–100%)</td>
<td>1–MSR (ranging 35–100%)</td>
</tr>
<tr>
<td>Minimum saving rate (MSR)</td>
<td>Varies by population</td>
<td>Flat 2% regardless of size*</td>
</tr>
<tr>
<td>Minimum loss rate (MLR)</td>
<td>Years 1–2—not applicable Year 3—varies by population</td>
<td>Flat 2% regardless of size†</td>
</tr>
<tr>
<td>Maximum sharing cap</td>
<td>Years 1–2—payments capped at 7.5% of ACO’s benchmark</td>
<td>Payments capped at 10% of ACO’s benchmark</td>
</tr>
<tr>
<td></td>
<td>Year 3—10% of benchmark</td>
<td></td>
</tr>
<tr>
<td>Shared loss cap</td>
<td>Years 1–2—not applicable Year 3—7.5%</td>
<td>Year 1—5% Year 2—7.5% Year 3—10%</td>
</tr>
<tr>
<td>Shared savings</td>
<td>Savings are shared once the MSR is exceeded, up to 52.5% of the net savings, up to a cap of 7.5% of the benchmark</td>
<td>Savings are shared once the MSR is exceeded, up to 65% of net savings, up to cap of 10% of the benchmark</td>
</tr>
<tr>
<td>Withholding</td>
<td>Flat 25% of any earned performance payment*</td>
<td>Flat 25% of any earned performance payment*</td>
</tr>
</tbody>
</table>

*Eligible for sharing only the savings that exceed the MSR

†Not responsible for repaying Medicare for excess expenditures within the MLR.

‡At the end of each three-year agreement period, positive balances will be returned to the ACO. If the ACO does not complete its agreement, it forfeits any savings withheld.
enabling groups that may already have experience with population management to immediately assume liability for losses up to a shared cap (proposed at 5 percent above the benchmark in the first year, 7.5 percent in the second, and 10 percent in the third year), and in return to share a higher percentage (up to 60 percent) of any savings they can generate. In both models, the total amount an ACO may receive in shared savings is capped as a percentage of the benchmark (7.5 percent for the one-sided model; 10 percent for the two-sided model).

ACOs are designed to be a winning financial proposition for Medicare. If ACOs produce savings, Medicare shares them. If ACOs increase costs, the ACO bears some liability for the losses. Medicare only loses if the costs of an ACO’s patients exceed 107.5 percent (or 110 percent, depending on which model the ACO adopts). In total, CMS estimates that ACOs could create between $190 million and $960 million in federal savings over three years, with a best guess of $510 million. This estimate is based on the expectation of approving 75 to 150 ACOs in this period, covering a total of 1.5 million to 4 million Medicare beneficiaries.

Individual ACOs face a great deal of uncertainty, and several elements of the financial model make it difficult to predict what financial reward, if any, they would earn. First, in addition to assuming losses on any expenditures over the benchmark, ACOs will incur substantial costs to start and maintain. Second, not all of the earned savings will be available to offset these expenses, because as an insurance policy, shared savings will be subject to a 25 percent withholding to offset potential future losses. Third, ACOs will be able to receive additional incentives ranging from 0.5 to 5.0 percent of the savings if they include Federal Qualified Health Centers (FQHCs)—which provide primary health care services to medically underserved communities and vulnerable populations—and Rural Health Centers (RHCs). However, these incentives will depend upon the percentage of patients who make a threshold number of visits to FQHCs and RHCs, and may vary unpredictably from year to year. And finally, in order to reduce administrative fees associated with annual variance in total cost per beneficiary, CMS will only reimburse an ACO if its savings are greater than a Minimum Savings Rate (MSR). In the two-sided risk model, ACOs will only be eligible for cost sharing on savings greater than 2 percent of the benchmark; in the one-sided risk model, the MSR will be variable—the bar will be higher in smaller populations that have a greater variation in expenditures, and lower for larger ACOs with lower variation (see Table 1, page 29).

For the many physician groups and health care executives who are considering whether to establish ACOs, there are few markers by which to guide expectations. The best predictive data comes from CMS’ Physician Group Practice (PGP) Demonstration, which evaluated 10 large physician group practices between 2005 and 2010. In this experiment, the PPGs were eligible for shared savings without any downside liability. Not all the groups were able to produce savings; in fact, few were. In the first year, two PPGs received shared savings payments; in the second year, four received shared savings payments; and by the final year, only half of the PPGs in this experiment qualified for savings. In a recent review of the PGP experiment, researchers note that the participants in the PGP demonstration invested substantially in order to achieve their savings

<table>
<thead>
<tr>
<th>Table 2. Quality measures</th>
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</thead>
<tbody>
<tr>
<td><strong>Five categories</strong></td>
</tr>
<tr>
<td>Patient and caregiver experience</td>
</tr>
<tr>
<td>Care coordination</td>
</tr>
<tr>
<td>Patient safety</td>
</tr>
<tr>
<td>Preventive health</td>
</tr>
<tr>
<td>At-risk population and frail elderly health care</td>
</tr>
</tbody>
</table>
goals, on average spending $1.7 million in the first year alone. According to their analysis, an ACO would need to reduce costs by 20 percent over the three-year period in order to earn enough in shared savings to recoup this initial expenditure. They conclude that “Given that the percentage of shared savings in the first three years was so low for experienced, integrated physician practices, it seems highly unlikely that newly established, independent practices would be able to average the necessary 20 percent return on their investment.”

As demonstrated by this experiment, the promise of Medicare shared savings may not be enough to motivate the formation of ACOs. However, there are other reasons to be interested in the new model. Some physicians see this model as an inevitable course for health care reform, and the earlier they get on board, the easier the transition will be down the road. Many look to the Kaiser Permanente, Intermountain Healthcare, and Mayo models (large non-profit health systems comprising an insurer, hospitals, and contracted provider groups) as successful pillars of integrated care and are already pursuing similar models; the added promise of shared savings provides incentives and rewards for expediting their efforts.

**Quality improvement**

As a prerequisite to sharing in any savings, an ACO must rigorously demonstrate that it provides high-quality care. Physician-directed quality assurance committees in each ACO will be responsible for collecting and reporting standardized measures in five key areas as well as demonstrating meaningful use of health information technology (see Table 2, page 30).

In year one, the prerequisite for receiving any shared savings is full reporting, whereas in years two and three, ACOs will be required to meet minimum performance standards (measured against historical benchmarks). Eventually, CMS plans to give ACOs a performance score with 0 to 2 possible points per measure, with a perfect score totaling 130. This score will be converted to a percentage and multiplied by any eligible shared savings. An ACO achieving a quality score of 112 has an overall score of 80 percent (112/130), thereby qualifying to earn 80 percent of the 65 percent MSR the ACO can earn under the two-sided model with FQHC and RHC participation. This score yields a final sharing rate of 52 percent, which would apply to the total savings it generated above the 2 percent MSR, and cannot exceed 10 percent of the ACOs benchmark cost per patient.

While many of the quality measures overlap with those used in other national quality measurement programs, some of the ACO measures are notably more aggressive, including outcome measures as well as process measures. For instance, measurement of diabetes care with the electronic health record incentive program’s clinical quality measures (CQMs) includes measuring glycohemoglobin (HgA1c) levels, blood pressure, and LDL cholesterol. ACOs reporting on diabetes care will include maintaining HbA1c less than 8 percent, blood pressure below 140/90, and LDL less than 100.

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**Table 3. Laws addressed in the ACO rule**

<table>
<thead>
<tr>
<th>Law</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physician Self-Referral Law (the “Stark Law”)</td>
<td>Prohibits physicians from making referrals for Medicare “designated health services,” including hospital services, to entities with which they or their immediate family members have a financial relationship, unless an exception applies.</td>
</tr>
<tr>
<td>Federal Anti-Kickback Statute</td>
<td>Provides criminal penalties for individuals or entities that knowingly and willfully offer, pay, solicit, or receive remuneration to induce or reward the referral of business reimbursable under any federal health care program.</td>
</tr>
<tr>
<td>Civil Monetary Penalties Law (the CMP)</td>
<td>Prohibits a hospital from making a payment, directly or indirectly, to induce a physician to reduce or limit services to Medicare and Medicaid beneficiaries under the physician’s direct care.</td>
</tr>
</tbody>
</table>

**Table 4. Legal waivers for the ACO Medicare shared savings program**

- For distribution of shared savings among ACO participants
- For distribution of shared savings toward other entities for services directly related to the ACOs participation in the Shared Savings Program
- For certain financial relationships that are necessary for and directly related to the ACO’s participation in the Shared Savings Program
Legal accommodations

ACOs face a number of legal considerations. Specifically, the ACOs’ collaborative incentive schemes are at odds with many of the fraud and abuse laws, including the Stark Law, Anti-Kickback Statute, and Civil Monetary Penalties Laws (CMP). These laws were passed to limit market power and self-referral behaviors that drive up the cost of care; now ACOs are trying to direct these very same behaviors toward driving down costs. Anti-kickback issues may arise if physicians are rewarded for making referrals within the ACO to other providers who have a shared stake in reducing...
costs of care for their set of Medicare patients. The CMP prohibits incentives to provide discrepant care to Medicare patients, seeking to protect them from substandard care; however, the statute applies regardless of the medical necessity or inappropriate use of the services and, therefore, may conflict with the incentives provided to ACOs to reduce costs for these patients (see Table 3, page 31).

The effectiveness of ACOs may depend on exemption from, or relaxation of, these regulations. However, significant relaxation of these regulations could potentially lead to opportunistic participation by organizations with only a secondary interest in improving efficiency or quality for the affected Medicare constituency. The Department of Health and Human Services has acknowledged these conflicts in the shared savings program, and has proposed relaxing regulations in only three limited circumstances to avoid abuse (see Table 4, page 31).

Antitrust regulation will be a key component of ACO regulation. Skeptics of ACOs point out that the major economic incentive to form such organizations may not be cost-sharing with Medicare but, rather, gaining market power and better contracts in the provision of care for non-Medicare patients. As Richman and Schuerman argue in a recent Journal of the American Medical Association article, ACOs may be more likely to fix prices and exacerbate monopolistic imbalances, especially if they would have otherwise been in competition among themselves.10

Provider consolidation in private insurance markets poses a potential challenge to health care affordability—researchers have estimated that hospital mergers have led to a price increase of 40 percent in local markets.11 To counteract this, ACOs will be routinely monitored for potential monopolistic behavior. ACOs with a combined market share of 30 percent or less of the primary service area will be considered in the “safety zone,” and those with a market share less than or equal to 50 percent will be able to operate without scrutiny of antitrust regulations.

Another major legal issue concerns the tax-exempt status of many of the organizations that will participate in the shared savings program, and the potential for net earnings accruing to the benefit of knowledgeable inside participants. ACOs will need to demonstrate to the Internal Revenue Service that they are not inappropriately siphoning shared savings (or losses) toward tax-exempt parties within the overall ACO structure.

**Internal structure**

CMS has intentionally avoided a one-size-fits-all model in order to foster creative new ways to streamline care and to allow enough flexibility for ACOs to emerge within existing local health care parameters. There are four basic models, with various combinations of providers, provider groups, and hospitals (see figure, page 32).

Primary care providers (defined as doctors of medicine and osteopathy, family practice, general practice, and geriatric medicine) may only participate in one ACO, and Medicare patients who receive a majority of their primary care services from these providers will be assigned to that ACO. The ACO shared saving scheme makes providers’ payments dependent on the number of services and cost of services delivered by other providers. Critical to the successful ACO will be a high level of coordination of care between primary care physicians and specialists (whether or not they are in the ACO).

The process of forming an ACO will entail a renegotiation of the balance of power and decision-making authority between practice groups, hospitals, primary care providers, and specialists, as each group will be affected differently depending on the priorities and sharing policy of the ACO. Shared savings can be wholly or partially allocated among the participants in a number of ways—according to the proportion of savings an individual or department generates, flat percentages, or negotiated quantities—creating an opportunity to accommodate for disproportionate losses to some participants and incentivize participation by others.

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Dr. Abbott is a resident in otolaryngology-head and neck surgery, Massachusetts Eye and Ear Infirmary/ Harvard combined program in Boston. She is currently completing a clinical research fellowship at Children’s Hospital, Boston, MA.

Critics have accused ACOs of being “managed care lite.” But several key distinctions exist between ACOs and HMOs, perhaps the most important being that ACO patients are not restricted to stay in network. If patients choose to participate, they will still be able to seek care from non-ACO affiliated care providers, without pre-authorization or other hurdles. This means there is less control over patient choice of the sort that created a backlash to managed care in the 1990s. It also means that ACOs have imperfect control over a large portion of costs accrued by its Medicare patients, and that savings may be limited.

Patient participation will be voluntary and transparent. All beneficiaries will be notified about whether a caregiver participates in an ACO, provided with explanatory materials about the ACO, and informed that the ACO will share in savings from improved coordination of their medical services. Quality performance scores and shared savings or losses for each ACO will be available to the public.

As Kocher and Sahni note in an article published in The New England Journal of Medicine, whoever controls the ACO will control the largest share of savings. How savings are generated will likely depend on who makes the relevant decisions. For example, an ACO comprised entirely of physicians might focus predominantly on decreasing hospital admissions and lengths of stay. The savings to the ACO (split between the physicians and federal government) will represent a loss of revenue to the hospitals. On the other hand, a hospital-controlled ACO might attempt to constrain salaries and reduce the number of tests and procedures provided. If hospitals are ultimately better able to form ACOs than physician-led groups or even physician-hospital partnerships, this may lead to increased salaried employment of physicians.

Although ACOs are only required to have primary care physicians, they are responsible for all expenses for their Medicare beneficiaries, including specialist fees and any care sought outside the ACO. Bringing specialists into the arrangements allows ACOs to refer their patients to providers who are working toward common savings goals. Specialists will be allowed to join more than one ACO, each of which may require different criteria for specialist participation through performance measures, mandating use of information technology, or limiting use of equipment to negotiated and approved devices and products. With much of the savings expected to come from reduced referrals and procedures, specialists may seek compensation for their reduced business, for instance by entering into compensatory salary agreements or negotiating a higher portion of the savings distribution. However, because of the high degree of uncertainty about whether an ACO will generate eligible shared savings, ACOs may find it hard to guarantee upfront incentives to recruit the specialists who are most likely to contribute to cost savings in competitive markets. Then again, specialists choosing to remain outside of ACOs potentially face challenges as well. They will not benefit from shared savings and may have patients directed away from them unless they can prove they offer lower-cost services, higher quality, or both.

### Table 5. ACO versus HMO

<table>
<thead>
<tr>
<th></th>
<th>ACO</th>
<th>HMO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountability</td>
<td>Provider</td>
<td>Payor</td>
</tr>
<tr>
<td>Patient choice</td>
<td>Mildly limited, based on referral patterns</td>
<td>Exclusively in network</td>
</tr>
<tr>
<td>Type of organization</td>
<td>Flexible (IPA, PHO, etc)</td>
<td>One size fits all</td>
</tr>
<tr>
<td>PCP role</td>
<td>Care coordinator</td>
<td>Gatekeeper</td>
</tr>
<tr>
<td>Payment models</td>
<td>Based jointly on quality and efficiency</td>
<td>Encourage limiting access</td>
</tr>
</tbody>
</table>

Patient participation

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so that patients may switch providers and ACOs in an informed manner.

Another key distinction from HMOs is that, for ACOs, accountability rests with providers and, in large part, with physicians—a group trusted by patients and dedicated to patient care—rather than with insurance companies. Nevertheless, success of the endeavor will require good public relations efforts. As history has shown, patients will be reluctant to sign up if they think ACOs are going to limit their choices and access (see Table 5, page 34).

**Conclusion**

Since the publication of the provisional rule for ACOs in March, many critics have expressed concerns that the regulations create challenging parameters within which to produce shared savings. Proposed modifications to attract ACO participants have included lowering the minimum savings rate, reducing the data collection requirements that pose a barrier to entry, or eliminating the 25 percent withholding. Despite the various critiques, there is still an optimistic sense that ACOs will be able to bend the national health care cost curve in a favorable direction. Much attention will be paid to the first cycle, which, as of now, is still set to begin in 2012. If individual ACOs are not able to net positive compensation, or if patients are wary of participating in the program, ACOs may ultimately have a limited impact. But in the meantime, many organizations will be laying the groundwork for forming ACOs in expectation of success. Surgeons should anticipate that the early decisions and initial framework for any emerging ACO could have a strong bearing on the structure of their practice and patient care, and they are encouraged to participate in these discussions.

**References**

During the 2010 Clinical Congress in Washington, DC, the Surgical Infections and Environmental Risks (SIER) Committee of the Board of Governors continued to implement its mission of presenting well-designed clinical and cost-effectiveness research on surgical infections and environmental risks.

Two timely panel discussions were presented at the meeting. Hospital Acquired Infections: Can We Win the Battle? explored the new resistant gram positive and gram negative bacteria that potentially infect the postoperative surgical patient; and Infected Mesh: The Problem That Won’t Go Away discussed the scope of infected mesh, and biofilms providing practical approaches to surgical management of mesh infections.

The committee will present three panel symposia at the upcoming 97th Clinical Congress to be held in San Francisco, CA. One of this year’s panels, titled Surgeon Wear and Tear: The Hidden Cost of Adverse Ergonomics, is an inquiry on how poor ergonomic set up and instruments may predispose surgeons to repetitive injuries. The second panel, titled Early Diagnosis of Surgical Infection: The Next Frontier, will update surgeons on innovative techniques including polymerase chain reaction, fluorescence hybridization, and biomarkers to allow rapid identification of pathogens within hours as opposed to days, leading to prompt and improved management of surgical infections. Additionally, a session jointly sponsored by the Committee on Trauma and the SIER Committee, titled Practical Approaches to Aggressive Surgical Infections, will investigate the increasingly common problem of fulminant surgical infections.

The former Chair of SIER, Michael A. West, MD, FACS, has provided tremendous support and stability to the committee, and the Vice-Chair, Jan
K. Horn, MD, FACS, has energetically contributed to the activities of the committee.

Various mandates have been developed by the National Quality Forum and enforced by federal legislation that prevent payment for “never events.” Because three of these 10 never events involve infections that potentially threaten surgical patients, the committee recognizes that enhancing basic knowledge regarding surgical infections is a cornerstone in providing quality care. The committee also acknowledges that physicians have much to learn regarding prevention efforts, as well as much to do to educate surgeons, patients, and elected officials on the nature and outcome of surgery-related infections.

The committee is hopeful that focusing on important topics, such as the potential of operating room noise pollution to reduce the safety of operative procedures, will act as a catalyst to improve the environment in which surgeons work. Additionally, a forum exploring sleep deprivation among surgeons will be proposed for the 2012 Clinical Congress in Chicago, IL.

The ideas and wisdom of all Fellows of the College are welcomed by the committee in its mission to enhance patient safety by improving prevention, diagnosis, and treatment of surgical infection and to improve the totality of the surgical environment.
Policymakers and researchers continue to debate whether there is an overall shortage of surgeons, a maldistribution, or both. The recurring question, “How many surgeons do we need?” has not been definitively answered. Specific surgeon-to-population ratios exist that are considered benchmarks for this issue, but they offer little guidance on what constitutes a shortage.¹² In this article, the Gini index—a tool for assessing the overall fairness of the distribution of surgeons—is presented, along with guidance for how it may be useful in monitoring geographic access to surgical services.

While we know that growth of the general surgery workforce has not kept pace with U.S. population growth, we do not know whether this has changed the geographic distribution of general surgeons across U.S. counties.³ Geographic distribution can be measured by the Gini index, a number that characterizes how evenly a resource is spread across a population.* This article employs the Gini index to describe the geographic distribution of general surgeons and selected other groups of physicians over time from 1999 to 2008.

*The Gini Index is usually used to measure income inequality across n-tiles of a population. For example, the top 5 percent of the population may have 40 percent of the total income in a nation resulting in a relatively high Gini index, perhaps 0.40. The Gini index is named after Corrado Gini (1884–1965), an Italian political scientist.
graphic area or some segment of the population. For physician distribution, we calculated the index for counties and weighted them according to the proportion of the population living in each county. The index ranges from 0 to 1, with smaller values representing more equal distribution.

**Calculating the Gini index for general surgeons**

Figure 1, page 38, illustrates the Gini index calculation for general surgeons with neurosurgeons included for comparison. The green diagonal line represents a perfectly even distribution of surgeons per population, or a Gini index of 0.0.† For general surgeons, the Gini index is the area bounded by the green line and the red curve, divided by the total area under the green line.

In Figure 1, the lines representing general surgeons (red) and neurosurgeons (blue) do not leave the horizontal axis until they have reached 4.9 percent and 24.6 percent, respectively. This means that nearly 25 percent of the U.S. population lives in a county that doesn’t contain a neurosurgeon, and close to 5 percent are without a general surgeon. Similarly, 50 percent of the U.S. population lives in counties that contain just 15.5 percent of the U.S.’s neurosurgeons and 30 percent of the general surgeons.

**Generalists more evenly distributed than specialists**

As physicians become more specialized, the Gini index climbs. The Gini index for primary care physicians in 2008 was 0.232, while the Gini index for
general surgeons was higher, at 0.296. This indicates that general surgeons are somewhat less evenly distributed than primary care physicians.

### Data and methodology

This analysis uses the Area Resource File (ARF) data from the Health Resources and Services Administration (HRSA) across the period 1999–2008. All ARF physician data come from the American Medical Association Physician Masterfile. For this research, residents were excluded from physician and surgeon counts. Otherwise, physicians with the applicable, self-reported primary specialty are included in the data. Primary care physicians were defined as medical doctors who self-reported primary specialties of family medicine, general internal medicine, general practice, and pediatrics.

The population data is from the U.S. Census Bureau as reported in the ARF, and was aggregated at the modified Federal Information Processing Standards (FIPS) level for all U.S. counties. All years of data except for 2000 and 2001 are official census estimates. Those two years used actual census counts. All Gini index calculations were done in STATA 11, and percent changes and trends were calculated in Microsoft Excel 2010.

Among surgical subspecialists, the Gini index climbs even higher. The Gini indices in 2008 for neurosurgery and ophthalmology were 0.494 and 0.371, respectively. This is not surprising because these surgical subspecialties require a more populous area to sustain the appropriate volume of surgeries and support resources.

### Physician distribution over time

Figure 2, page 39, traces the changes in the Gini index for six groups of physicians and surgeons. The surgical subspecialty Gini indices reflect a slight move toward greater maldistribution from 2001 through 2006. In 2007 and 2008, this trend appears to be stabilizing (see table, this page). Primary care physician and general surgeon distribution has been relatively stable since 2005, with a slight downward trend toward a more equal distribution.

### Annual percent change in the Gini index

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary care</td>
<td>-1.64%</td>
<td>-4.85%</td>
<td>3.07%</td>
<td>0.58%</td>
<td>1.51%</td>
<td>1.19%</td>
<td>-0.27%</td>
<td>0.79%</td>
<td>-0.38%</td>
</tr>
<tr>
<td>General surgery</td>
<td>-4.43</td>
<td>-0.43</td>
<td>-1.12</td>
<td>-0.29</td>
<td>1.62</td>
<td>1.31</td>
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*In 2001, we found the ARF-reported population data to be inconsistent with the overall trend. This outlier datum was dealt with by estimating the 2001 modified FIPS populations as the midpoint of the 2000 and 2002 data.
geographic imbalance than what currently exists. Because the Gini index is sensitive to changes in distribution, it allows researchers to project distribution shifts in the future. For example, if all of the general surgeons from each of the counties with three to six practicing general surgeons were to move to the 22 counties with the most surgeons, the Gini index would shift from 0.296 to 0.324. This shift would further limit access to surgical services for 17 percent of the U.S. population.

Limitations and implications

This analysis uses counties and county equivalent areas to calculate the relative distribution and concentration of physicians and surgeons. Using counties provides a general picture of the distribution of geographical access to physicians. Since counties vary widely in size and population, especially in the western part of the U.S., they are not ideal units of measure. However, the variations are not so large as to make the index unusable.

Counties are also used as the basis for policy tools related to the distribution of physicians. For instance, the Bureau of Health Professions uses the county as a default starting place for the designation of health professional shortage areas (HSPAs), and the Bureau of Primary Health Care uses counties as the basis for medically underserved areas. While these designations generally refer to primary care, mental health, and dental health care shortages, the Affordable Care Act established a 10 percent bonus for general surgeons who perform major surgery in a primary care HPSA. A recent American College of Surgeons Health Policy Research Institute publication outlines preliminary steps for a developing surgical HPSA designation. Using the Gini index to estimate the inequality in surgeon distribution is a way to monitor surgical access issues over time. Moreover, it underscores the need to develop a surgical HPSA designation to help improve access to surgery in underserved areas.

References


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Coding hernia and other complex abdominal repairs

by Christopher Senkowski, MD, FACS; and Jenny Jackson, MPH

Correct coding for complex abdominal wall reconstruction and hernia repair continues to cause surgeons a great deal of confusion. In particular, much confusion exists regarding coding for mesh repair. The American College of Surgeons (ACS) Coding Hotline has received numerous queries about these procedures. Similarly, participants at ACS Coding Workshops have expressed confusion. This article addresses some of the more difficult questions about coding for abdominal wall repair.

Hernia repair

Hernia repair includes isolation and dissection of the hernia sac, reduction of intraperitoneal contents, fascial repair, and soft tissue closure. The use of mesh or other prosthesis is considered inherent to the repair of inguinal hernia (49491–49525), and the implantation of mesh is not separately reportable. In the case of epigastric (49570–49572), umbilical (49580–49587), and Spigelian (49590) hernias, the placement of mesh or other prosthesis, if performed, is inherent to the repair and, therefore, not separately reportable.

The implantation of mesh or other prosthesis add-on code 49568, *Implantation of mesh or other prosthesis for open incisional or ventral hernia repair or mesh for closure of debridement for necrotizing soft tissue infection (List separately in addition to code for the incisional or ventral hernia repair)*, can be reported with the repair of incisional or ventral hernias (49560–49566), when performed. This add-on code applies to any type of mesh or other prosthesis—whether synthetic, biologic, or otherwise. To be clear, when used appropriately as an add-on to hernia repair codes 49560–49566, code 49568 represents any type of mesh or other prosthesis—whether autograft, dermal graft, xenograft, or an as yet to be imagined graft. In addition, code 49568 includes the work of placing the mesh, independent of the size of mesh used. With respect to reporting and reimbursement for the implant, it is the facility’s responsibility to report the type and size of mesh used.

Coding highlight

How do you code a primary reducible incisional hernia repair, bilateral component separation, and the implantation of mesh?

Component separation is also known as the “separation of parts operation.” The muscle flap code 15734 is the appropriate code to report; it is reported twice to represent the mobilization of the musculo-fascial flap on both sides. The reducible incisional hernia repair is reported with code 49560. The implantation of mesh is correctly reported with add-on code 49568 because the hernia is incisional. These services should be reported as follows:

15734, *Muscle, myocutaneous, or fasciocutaneous flap; trunk*
15734–59, *Muscle, myocutaneous, or fasciocutaneous flap; trunk*
49560, *Repair initial incisional or ventral hernia; reducible*
49568, *Implantation of mesh or other prosthesis for open incisional or ventral hernia repair or mesh for closure of debridement for necrotizing soft tissue infection (List separately in addition to code for the incisional or ventral hernia repair)*

How do you code the excision of a 9 cm sarcoma in the external oblique muscle of the abdominal wall with complex closure and implantation of mesh?

Report code 22905 for the excision of the sarcoma. If the patient is a Medicare beneficiary, complex repair is not separately reportable. However, complex repair is separately reportable for non-Medicare patients and is reported with codes 13101 and 13102. Unlisted code 22999 is the appropriate code to report for the implantation of mesh. When an unlisted code is reported to describe a service, it will be necessary to submit supporting documentation along with the claim to provide an adequate description of the nature, extent, and need for the procedure. These services should be reported as follows:

continued on page 44
Coding highlight (continued)

22905, Radical resection of tumor (eg, malignant neoplasm), soft tissue of abdominal wall, 5 cm or greater
13101, Repair, complex, trunc; 2.6 cm to 7.5 cm
13102, Repair, complex, trunc; each additional 5 cm or less (List separately in addition to code for the incisional or ventral hernia repair)
22999, Unlisted procedure, abdomen, musculoskeletal system

How do you code laparoscopic repair of a hiatal hernia with implantation of mesh?

If this is a Type I or sliding hiatal hernia as seen with the great majority of anti-reflux operations, then code 43280 is reported. Placement of mesh is not typical or inherent to this operation, and no scientific data justify its routine use at present. In this instance, report unlisted code 49659 and include the value of the extra work for implanting the mesh. The type and size of mesh will be reported by the facility. Note that the components of repairing a paraesophageal hernia (Type II or III hiatal hernia) are specific and do not apply to the more common fundoplication for gastroesophageal reflux disease. If the operation is a laparoscopic repair of a paraesophageal hernia with all of its inherent steps (sac dissection and removal, esophageal mobilization, and so on), then code 43282, Laparoscopy, surgical, repair of paraesophageal hernia, includes fundopasty, when performed; with implantation of mesh, is reported. These services should be reported as follows:

Type I or sliding hiatal hernia repair with mesh:
43280, Laparoscopy, surgical, esophagogastroduodenoplasty (eg, Nissen, Toupet procedures)
49659, Unlisted laparoscopy procedure, hernioplasty, herniorrhaphy, herniotomy

Type II or III hiatal hernia repair with mesh:
43282, Laparoscopy, surgical, repair of paraesophageal hernia, includes fundopasty, when performed; with implantation of mesh

How do you code the repair of a recurrent parastomal hernia with implantation of 300 sq cm of human acellular dermal graft?

Report code 44346 for the repair. Placement of mesh is not typical or inherent for this procedure and, therefore, can be reported separately. Because the mesh is implanted to support the abdominal wall, the unlisted code 22999, Unlisted procedure, abdomen, musculoskeletal system should be reported and not code 49999, Unlisted procedure, abdomen, peritoneum and omentum. These services should be reported as follows:

44346, Revision of colostomy, with repair of paracolostomy hernia (separate procedure)
22999, Unlisted procedure, abdomen, musculoskeletal system

How do you code the repair of an initial incarcerated inguinal hernia with or without implantation of mesh?

The appropriate code to report the service is 49507. Implantation of mesh is not separately reportable because it is inherent in all of the inguinal hernia repair codes. This applies to any type of mesh, whether synthetic, biologic, or otherwise. Reporting an additional code for mesh placement represents incorrect coding. These services should be reported as follows:

49507, Repair initial inguinal hernia, age 5 years or older; incarcerated or strangulated

How do you code the repair of bilateral ventral hernias and an incarcerated umbilical hernia?

The current surgical teaching for abdominal wall hernia repair would recommend the placement of mesh as opposed to primary repair. The tenets of repair also describe a single piece of mesh with overlap to cover all the defects, whether single or multiple. The coding process would not be affected if there were multiple incisional or “ventral” defects or an additional umbilical defect. In fact, it is common when repairing an incisional hernia to find multiple defects. The surgeon should report 49561 and, if mesh is used, then the add-on code 49568 should also be reported. Because it is likely that the mesh would cover all the defects, reporting these two codes would be appropriate for all work. It would be exceedingly unusual for a surgeon to place two separate pieces of mesh for the reasons mentioned above. However, if two distinct defects were repaired and mesh was implanted—for example, an incisional defect from previous flank incision and concomitant incisional defect for low suprapubic incision, where the surgeon implants two separate distinct pieces of mesh or two distinctly separate repairs—the surgeon should report the service as follows:

49561, Repair initial incisional or ventral hernia; incarcerated or strangulated
49568, Implantation of mesh or other prosthesis for open incisional or ventral hernia repair or mesh for closure of debridement for necrotizing soft tissue infection (List separately in addition to code for the incisional or ventral hernia repair)

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How do you code the removal of infected mesh, debridement of fascia, component separation, segmental small bowel resection, and implantation of mesh?

Resection of bowel is reported with code 44120. Separation of components is reported with the trunk muscle flap code 15734 (see earlier discussion, the first question in the coding highlights section). The removal of infected mesh is reported with codes 11005 and 11008. The implantation of mesh for closure of debridement for necrotizing soft tissue infection is reported with code 49568. Codes 11008 and 49568 are add-on codes and thus, modifier 51 exempt. These services should be reported as follows:

44120, Enterectomy, resection of small intestine; single resection and anastomosis
15734, Muscle, myocutaneous, or fasciocutaneous flap; trunk
11005, Debridement of skin, subcutaneous tissue, muscle and fascia for necrotizing soft tissue infection; abdominal wall, with or without fascial closure
11008, Removal of prosthetic material or mesh, abdominal wall for infection (eg, for chronic or recurrent mesh infection or necrotizing soft tissue infection) (List separately in addition to code for primary procedure)
49568, Implantation of mesh or other prosthesis for open incisional or ventral hernia repair or mesh for closure of debridement for necrotizing soft tissue infection (List separately in addition to code for the incisional or ventral hernia repair)

While performing a laparoscopic bariatric procedure, a small hiatal hernia is discovered and repaired, and mesh is placed. How is this reported?

The appropriate laparoscopic bariatric code would be reported, and the unlisted laparoscopic code 49659 is appropriate to report both the hiatal repair and the implantation of mesh. These services should be reported as follows:

49659, Unlisted laparoscopy procedure, hernioplasty, herniorrhaphy, herniotomy

Payor issues

Some caveats to remember (that may differ from Medicare guidelines) when submitting the previous scenarios to private payors include the following:

- Some payors software edit packages may bundle these codes together; therefore, it may be appropriate to append modifier 59 (distinct procedural service).
- Many payors (including Medicare) recommend against reporting modifier 51 on claims. Their processing systems have hard-coded logic to append the modifier automatically to the appropriate codes on each claim.
- When an unlisted code is reported to describe a service, it will be necessary to submit supporting documentation along with the claim to provide an adequate description of the nature, extent, and need for the procedure.
- Code descriptors and work valuation may be re-evaluated as the scientific evidence supports changes in practice.

Codes in the Skin Replacement Surgery and Skin Substitutes section of the 2011 Current Procedural Terminology (CPT)* handbook (15040–15431), were specifically created in 2005 for treatment of wounds in burn and trauma patients. These codes were not intended to be used for abdominal wall fascial repair or fascial support; in other words, underlay or overlay support. Specifically, 15330, Acellular dermal allograft, trunk, arms, legs; first 100 sq cm or less, or 1% of body area of infants and children, and 15430, Acellular xenograft implant; first 100 sq cm or less, or 1% of body area of infants and children, are not appropriately reported for reconstruction of an abdominal wall hernia.

In the case of a strangulated hernia where other organs are resected (for example, the intestine), appropriate resection codes are reported separately in addition to the hernia repair code.

If you have questions or comments regarding this article, contact Jenny Jackson at jjackson@facs.org or 202-672-1506. If you have additional coding questions, contact the Coding Hotline at 800-227-7911 between 8:00 am 5:00 pm, CST, excluding holidays.

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Ms. Jackson is Practice Affairs Associate, Division of Advocacy and Health Policy, Washington, DC.

*All specific references to CPT (Current Procedural Terminology) terminology and phraseology are © 2010 American Medical Association. All rights reserved.
Motor vehicle accidents are the leading cause of death for U.S. teens, accounting for more than one in three deaths among 16–19 year olds. Male and female teen drivers are responsible for $19 and $7 billion, respectively, of the total costs of motor vehicle injuries. The crash risk for young drivers is highest at night, and also increases when adolescent passengers are in the car. To keep teen drivers safe, all states have implemented graduated driver licensing (GDL) systems. GDLs are designed to delay full licensure, while allowing teens to get their initial driving experience under low-risk conditions.

**Background**

Research suggests that the most comprehensive GDL programs are associated with 38 percent fewer fatal accidents and 40 percent fewer crashes resulting in injuries, among 16-year-old drivers. The idea of GDLs began in the 1970s, when two driving studies were conducted that suggested that younger drivers were involved in car crashes more often than middle-aged drivers, particularly between the hours of midnight and 6:00 am. This data also indicated that when these new drivers had young passengers in their vehicles, they had a significantly higher chance of being involved in a crash.

GDL systems address the high risks new drivers pose through a three-step process. First, new drivers must first obtain a learner’s permit, which allows them to drive only while under a licensed driver’s supervision. Learner’s permits must be held for a specified time, and in some cases, require a minimum amount of supervised driving. Research indicates that crash rates for drivers with learning permits are much lower than those of newly-licensed drivers. The second step under the GDL system involves drivers who have successfully completed the learner’s permit step and who are then given a provisional license that restricts unsupervised driving in higher-risk situations, such as late-night driving and driving with teen passengers. The third and final step is a driver receiving full licensure.

According to the Insurance Institute on Highway Safety, an optimal GDL system would have a minimum age of 16 to obtain a learner’s permit. The learning stage would last for at least six months and would require a parent or guardian to certify 30 to 50 hours of supervised driving. The intermediate stage would last until the driver turns 18 years old and would include both a night driving restriction beginning at 9:00 or 10:00 pm and a strict teen passenger restric-
tion, allowing either no passengers or no more than one in the vehicle.\(^4\)

Only six states—Arizona, Arkansas, Kansas, Minnesota, North Dakota, and Vermont—do not have a nighttime driving restriction in place for teen drivers; and 34 states and the District of Columbia have passenger restrictions for young drivers. The nighttime and passenger restriction laws vary from state to state, but typically the restrictions are lifted as new drivers gain experience and when teenage drivers mature. Driving restrictions are lifted for most drivers once they turn 18 years old.

**Legislative efforts**

All 50 states and the District of Columbia have a GDL system in place. However, many states are introducing legislation to strengthen their GDL systems to better protect teen drivers. During the 2011 session, 14 states sought to strengthen current GDL systems by introducing 24 pieces of legislation.

Both New Mexico and North Carolina passed GDL system enhancement legislation in 2011. The governor of New Mexico signed legislation (S. 9) that requires 30 additional days of supervised driving for every traffic violation a driver incurs when driving with a learner’s permit. Under the law, traffic violations include the use of cell phones while driving and seatbelt violations. In North Carolina, legislation (S. 636) was passed that requires drivers to have 60 hours of supervised driving with a learner’s permit before being issued a driver’s license.

Many states are addressing the matter of teen driving restrictions through legislative means outside of the GDL system, such as passing bans on cell phones while driving or requiring teens to attend school or working full-time before receiving a driver’s license.

With eight teens dying each day from motor vehicle injuries, state legislators are turning to enhanced GDL systems to better protect all drivers while allowing adolescents to gain the necessary on-the-road experience. For additional information on graduated driver licensing, or to discuss GDL initiatives being considered in a state legislature, contact Alexis Macias at amacias@facs.org.

**References**

C. Rollins Hanlon, MD, FACS—known to almost everyone as “Rollo”—died at his home in Kenilworth, IL, on May 3, 2011, at the age of 96, from lymphoma. Until a few weeks before his death, Dr. Hanlon was still working in his office as Executive Consultant for the American College of Surgeons, a position he held since serving as the College’s Director from 1969 to 1986. He is survived by his wife, Margaret Hammond Hanlon, MD, known as “Peg,” and their eight children: Philip Hanlon, Paul Hanlon, Richard Hanlon, Thomas Hanlon, Christine Hanlon, Mary Welch, Martha Hanlon, and Sarah Cigliano; eight grandchildren, and two great-grandchildren.

Early years
Dr. Hanlon was born in Baltimore, MD, into a middle-class, Irish-Catholic family. He derived his love of books and literature from his father, and his strong faith from his deeply religious mother, both of whom nurtured the intellects of their seven children.

Rollo, the sixth child, attended Loyola High School and enrolled in Loyola College Baltimore (now Loyola University Maryland), then a small, Jesuit institution of approximately 200 students. Dr. Hanlon majored in Classics, but quickly became enamored of science, and by his sophomore year knew he wanted to be a doctor. Recognizing his intelligence and drive, the dean allowed him to simply add science courses to his already rigorous Classics curriculum, and arranged laboratory sessions for him during vacation periods and the Christmas holidays. Dr. Hanlon, along with another student, conducted research on the single-cell organism paramecium during the summer of their sophomore year, resulting in Dr. Hanlon’s first scientific publication.

A former Loyola student showed Dr. Hanlon how to sneak into the operating rooms at Johns Hopkins University while he was in college. Taking advantage of the lax security of the 1930s, Rollo spent Saturdays watching operations, moving from room to room. In particular, Dr. Hanlon was fascinated by the famous neurosurgeon, Walter Dandy, MD. These experiences left a profound impression on him. Later he said about them, “I was part of Hopkins.” Through his passion and devotion for the institution, he remained a “part of Hopkins” for the rest of his life.

Dr. Hanlon entered Johns Hopkins University School of Medicine in 1934. After graduation, Dr. Hanlon and his close friend and classmate, William P.
Longmire, Jr., MD, FACS, stayed on as interns, and for another year as fellows in the experimental laboratory, where they studied shock. Dr. Hanlon then left Johns Hopkins for Cincinnati General Hospital, where he completed a Halstedian surgical residency under Mont Reid, MD, FACS. The residency included a fellowship at the University of California, San Francisco, where Dr. Hanlon worked under Howard Naffziger, MD, FACS, in neurological surgery and H. Glenn Bell, MD, FACS, in general surgery. Dr. Hanlon entered the U.S. Navy in 1944, and served in China and on the hospital ship Repose. He was discharged in 1946.

Dr. Hanlon’s friend, William P. Longmire, known as “Bill” to his friends and colleagues on the Hopkins faculty, convinced the chair of surgery, Alfred Blalock, MD, FACS, to appoint Dr. Hanlon (who was without a job at the time) as director of the experimental laboratory. After a year, Dr. Blalock appointed him resident, the top position in the Hopkins’ pyramidal residency system, which was a great honor, and a notable one for Dr. Hanlon, who had already served as resident at Cincinnati General Hospital. Dr. Hanlon served as assistant professor of surgery at Hopkins from 1948 to 1950 and was promoted to associate professor in 1950.

Dr. Blalock had performed the first subclavian to pulmonary artery shunt for tetralogy of Fallot, the Blalock-Taussig operation, in 1944. This innovation created a worldwide sensation and led to the referral of many patients with all types of congenital heart disease to Johns Hopkins. In this invigorating environment, Dr. Hanlon worked in the laboratory on procedures to correct or palliate congenital heart disease. He and Dr. Blalock developed the Blalock-Hanlon operation, a palliative procedure for transposition of the great vessels, and performed operations to correct coarctation of the aorta, ductus arteriosus, and of course, they also performed the Blalock-Taussig procedure for tetralogy of Fallot.

Dr. Hanlon and Dr. Ham-
mond were married in May 1949. Dr. Hammond was a pediatrician in charge of the rheumatic fever clinic at Johns Hopkins and a protégé of Helen Taussig, MD. During the couple’s three-week honeymoon trip in Europe, they were hosted by leading physicians in London, Paris, and Rome. In Rome, Ms. Hanlon was asked to perform a cardiac catheterization on a child, which confirmed the diagnosis of tetralogy of Fallot. Her new husband successfully performed the Blalock-Taussig operation on the young patient.

**Saint Louis University**

By 1950, Dr. Hanlon’s reputation as a leading cardiothoracic surgeon and innovator had been established. He was recruited at age 35 to be the first full-time professor in a clinical department at Saint Louis University. The research activities in the university’s clinical departments were weak. As chair of surgery, and with a sense of mission born of his strong Catholic convictions, Dr. Hanlon established this Jesuit institution as a major research and clinical resource for the Midwest, especially in the area of cardiothoracic surgery. His leadership spawned the development of excellence in other departments as well. With an eye toward transplanting the heart, Dr. Hanlon led a faculty research group that studied the effects of denervation of the heart, then thought to be a potential barrier to cardiac transplantation. When the heart-lung machine made open heart surgery feasible, he and his faculty were among the first in the Midwest to correct congenital defects, repair and replace cardiac valves, and perform coronary artery bypass grafts.

Dr. Hanlon demonstrated great respect for his students, who revered him for his integrity, elegant bearing, and commitment to the work of the university. Everyone knew he attended an early mass daily, before making rounds and operating. Dr. Hanlon was also greatly respected by his peers for the clarity of his thinking and his academic accomplishments. His speeches and discourses with others were learned and erudite; he often referred to the classics and history in his presentations, sending his audiences scurrying for dictionaries and reference books.

While in St. Louis, MO, Dr. Hanlon was elected president of the Society of University Surgeons, the Society for Vascular Surgery, and the Society of Clinical Surgery. He was a founding member of the American Board of Thoracic Surgery and a member and chairman of the American Board of Surgery.

**The College**

In 1967, Dr. Hanlon was elected a Governor of the American College of Surgeons, and two years later, he was elected as a Regent. In 1969, at the pinnacle of his academic career, the Board

“Dr. Hanlon will certainly be well remembered for his multiple contributions to the American College of Surgeons (ACS). But what I will remember the most is his character and his moral compass. He was always focused on [answering the question] “what would be the right thing to do?” What is in the best interests of the College, its staff, our members, and their patients? That’s how he thought about things. And he was a very thoughtful man, he always thought things through carefully. That trait—his thoughtfulness—gave him a firm foundation, that made him unflappable, and also a good resource on College matters.”

—David B. Hoyt, MD, FACS, Executive Director, ACS
“This is a sad day for American and international surgery. Let it be said that Dr. Hanlon was the face of American surgery. We have lost a great man and a true leader.”

—L. D. Britt, MD, MPH, FACS, FCCM, FRCS(Eng)(Hon), FRCS(Ed)(Hon), FWACS(Hon)

ACS President, and Brickhouse Professor and chair, department of surgery, Eastern Virginia Medical School, Norfolk, VA

of Regents appointed Dr. Hanlon as Director of the College, and he reluctantly left Saint Louis University, research, and clinical medicine. Dr. Hanlon's dream of transplanting the heart was realized by his associates in 1972, led by his protégé, successor, and dear friend, Vallee L. Willman, MD, FACS.

Dr. Hanlon's first project at the College was to review all the formal statements on surgical practice and ethics that had been made by the Board of Regents since the College's founding in 1913. He consolidated and extended these statements into the Statements on Principles, which served as the ethical and moral basis for his administration of the College, as well as the College's principles for the competent, ethical practice of surgery. This publication prescribed the duties of surgeons for preoperative, operative, and postoperative care; prohibited fee splitting and itinerant surgery; and advocated moral and ethical fitness, scientific honesty, and placing the welfare of the patient above all else. The Statements on Principles were published in 1974, and were most recently revised in 2008; they are now available online (http://www.facs.org/fellows_info/statements/stonprin.html). Throughout his association with the College, Dr. Hanlon believed strongly that its purpose was to promote the ethical and competent practice of surgery. As the Director, he embodied this ideology.

When Dr. Hanlon arrived at the College, it had lost its voice and influence in the area of graduate medical education. To regain it, he became very active in the Council of Medical Specialty Societies (CMSS), of which the College is a member. The CMSS was one of the sponsors of the Liaison Committee on Graduate Medical Education (LCGME), which was struggling to standardize graduate medical education. Dr. Hanlon's leadership, which included the presidency of the CMSS, firmly established the LCGME and its successor, the Accreditation Council for Graduate Medical Education (ACGME), as the national regulators of graduate medical education. The formation of the ACGME has led to the continuous elevation of the standards and quality of graduate surgical education.

Early on, Dr. Hanlon clarified the role of the Governors as the liaison between the Fellows and the Board of Regents. The Governors responded by generating annual reports for the Regents, which detail and prioritize the concerns of the Fellows. These reports set the agenda for the Regents and College staff, linking their activities directly to the problems surgeons experience in caring for their patients, and creating opportunities to elevate the standards of surgical practice.

During Dr. Hanlon's directorship, the number of scholarships for young surgeons was expanded, an international department was established to promote membership from Latin American countries, the humane care of research animals was advocated and supported financially, and the advisory councils were reorganized to recruit and engage surgical specialists in the College and its activities.

Dr. Hanlon's friend Bill Longmire served as a Regent, Chair of the Board of Regents, and President of the College during Dr. Hanlon's directorship. Although Rollo credited Bill with establishing the Committee on Young Surgeons, it is clear that they worked together to increase the influence of young surgeons...
in College affairs. Both physicians also revised the structure of College committees, setting term limits and specifying how chairs and vice-chairs are selected. This revised structure facilitated the influx of new ideas into College committees and gave more Fellows a voice in College affairs.

When Dr. Hanlon was appointed Director, the American Medical Association (AMA) spoke for the profession on legislative matters, and the AMA gradually diminished the College’s influence within its House of Delegates. In response, Dr. Hanlon pulled the College’s Delegates out of the AMA, shocking the association’s leaders and the College fellowship. He decided that only the College could represent the interests of its members in legislative matters. To do so, Dr. Hanlon established the College’s Washington, DC, Office, one of the most important events in the history of this organization.2

Dr. Hanlon, the Regents, and the College staff improved continuing education in surgery by establishing the popular Surgical Education and Self-Assessment Program.™ The spring meeting, now defunct, was initiated and eventually morphed into an energizing general surgery gathering when that specialty was suffering a crisis of identity and disproportionately inadequate reimbursement. Dr. Hanlon and Edwin Gerrish, MD, FACS, who he recruited as director of the Assembly Department, also initiated international meetings with the Royal Colleges and surgical organizations in France and Germany, providing Fellows and their spouses with opportunities for international travel, fellowship, and learning.

Retirement
Upon his retirement as Director, Dr. Hanlon was honored by the College by election to its presidency. He was also president of the prestigious American Surgical Association. Dr. Hanlon received many other honors and awards, including an honorary degree from Georgetown University, Washington, DC. In 2010, the American College of Surgeons presented Dr. Hanlon with its first Lifetime Achievement Award at the Clinical Congress in Washington, DC.

Dr. Hanlon generated respect and admiration throughout his service as Director. In an environment populated by America’s elite medical leaders, Rollo was a better thinker, a harder worker, better prepared, and more principled than most. He met the challenges of his tenure with an excellent nose for the most

“...
“During my 10-year tenure as Executive Director of the ACS, Rollo remained a steadfast supporter and mentor to me. With a broad historical perspective coupled with a fervent desire that the College meet its professional obligations, I often sought his advice on so many diverse issues. His thoughts were eloquently expressed and always based on the mission and values of ACS, which he espoused throughout his career.

I have many stories about Rollo that epitomize his devotion to the College. None stands out more than when a key lecturer at the Clinical Congress in San Francisco cancelled at the very last moment. With two days notice, he delivered an outstanding presentation to a large audience with clarity and succinctness on a topic of humanism.

Fortunately, before his death, I expressed to him my respect and appreciation for the many hours we spent together and his wise counsel. Rollo and his wonderful wife Peg have done so much for the ACS. We will miss him greatly.”

—Thomas R. Russell, MD, FACS, former Executive Director, ACS; Chair, ACS Foundation
Layton Rikkers, MD, FACS, named Editor-in-Chief of Surgery News

Layton “Bing” Rikkers, MD, FACS, will officially assume the role of Editor-in-Chief for the September issue of Surgery News, the official newspaper of the American College of Surgeons (ACS). His first editorial will be published in the October issue.

Dr. Rikkers, professor emeritus at the University of Wisconsin-Madison, was the A.R. Curreri Professor of Surgery and Chairman at the university. In June, he completed a 14-year tenure as editor-in-chief of Annals of Surgery. Dr. Rikkers has also served on the editorial boards of Digestive Surgery, the American Journal of Surgery, the Journal of Gastrointestinal Surgery, the British Journal of Surgery, the Journal of Surgical Research, Postgraduate General Surgery, and Surgery.


Dr. Rikkers earned his medical degree at Stanford University School of Medicine, Palo Alto, CA. His surgical residency was done at the University Hospital, in Salt Lake City, UT, and he completed a surgical hepatology fellowship at Emory University Medical Center in Atlanta, GA. Dr. Rikkers spent one year at the Royal Free Hospital in London as a hepatology research fellow. From 1984 to 1996, Dr. Rikkers served as professor and chair of the department of surgery at the University of Nebraska College of Medicine in Omaha, where from 1990 to 1996, he was also the M. M. Musselman Professor of Surgery.

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RURAL SURGERY SYMPOSIUM

Surgical Palliative Care
Timothy R. Siegel, MD, FACS

ACS and the Rural Surgeon
Phillip R. Caropreso, MD, FACS

The Hopedale Experience:
Surgeons as Primary Care Physicians
in a Rural Critical Access Hospital
Matthew B. Rossi, MD, FACS

Pay for Performance in Rural America
John A. Weigelt, MD, FACS

Specialty Procedures
Performed by Rural Surgeons
Robert P. Sticca, MD, FACS

The Economic Impact of a General Surgeon
to a Rural Community
Gerald Doeksen, PhD

Select presentations from the Rural Surgery Symposium address issues impacting rural surgery, trends in rural surgery practice, and American College of Surgeons (ACS) resources for the rural surgeon.

ACS Member: $200
Non-Member: $225

For more information, visit www.acs-resource.org or e-mail elearning@facs.org
New Director of Integrated Communications announced

Lynn D. Kahn has been appointed Director of the College’s Division of Integrated Communications. Ms. Kahn joins the College with more than 25 years of experience as an executive communications professional.

Recently, Ms. Kahn served as vice-president of programs and interim co-executive vice-president for the American Society of Plastic Surgeons (ASPS), Arlington Heights, IL. During her tenure there she oversaw, at various points in her career, clinical and practice management education, meetings and exhibits, online education, marketing, media and public relations, publications, and brand management activities.

She also served as assistant executive director of communications for ASPS from 2003 to 2007.

Ms. Kahn has been working in communications management since the early 1980s. She began her career as a health care reporter, and then became a news editor and senior editor for Hospitals magazine. She became a communications consultant (1986–1988) with Gerew Communications, and eventually, she joined the senior ranks in several associations. In addition to her role with the ASPS, Ms. Kahn served as vice-president of communications and special projects for the American College of Healthcare Executives (ACHE) from 1989 to 1998.

Ms. Kahn left ACHE in 1998 to become founder and president of The Kahn Group—a communications and strategic management business—where she worked on projects primarily for not-for-profit clients until taking the position with ASPS.

Ms. Kahn earned a masters of business administration degree at Loyola University Chicago, a masters of arts degree in journalism from the University of Missouri-Columbia, and a bachelor of arts degree from Washington University in St. Louis, MO.

In addition to in-depth exposure to and knowledge of all communications functions, Ms. Kahn is very familiar with the association world and has worked closely with surgeons. She is leaving a very positive and successful legacy at the American Society of Plastic Surgeons, and Dr. Hoyt and others who were involved in the search process are confident that her contributions to the work of the College will be numerous and significant.
The Fifth Annual Rural Surgery Symposium was held May 5 and 6 at the American College of Surgeons’ (ACS) headquarters in Chicago, IL. The symposium was followed on May 7 by a hands-on skills course titled Patient Safety and Quality in Rural Surgery: Advanced Skills Training for the Rural Surgeon (see sidebar, page 62).

The rural surgery symposium and skills course were sponsored by the ACS Division of Education, the ACS Nora Institute for Surgical Patient Safety, and the Mithoefer Center for Rural Surgery located in Cooperstown, NY.

Amy Halverson, MD, FACS, Director of the Nora Institute for Surgical Patient Safety; David C. Borgstrom, MD, FACS, program director for general surgery and director of trauma and surgical critical care at the Mithoefer Center; and Tyler Hughes, MD, FACS, Community Editor for Rural Surgeons, e-FACS.org, served as course directors.

Dr. Borgstrom welcomed the 41 participants with an overview of the previous four rural surgery symposiums. He noted that a number of presentations from this symposium would be available online at www.acs-resources.org or at e-mail elearning@facs.org. Following are select highlights from the symposium.

Surgical palliative care

The first speaker was Timothy R. Siegel, MD, FACS, chief, division of general surgery and co-director of inpatient palliative care service, Bassett Medical Center, Cooperstown, NY.

The mission for palliative care, Dr. Siegel said, is to improve: (1) physical and psychological symptoms of the patient; (2) caregiver well-being; (3) patient/family/doctor communications; and (4) solutions to mounting problems faced by patients, families, and the health care system. He noted that there are currently 36 million Americans older than 65 years of age; 90 percent have one chronic illness and 77 percent have two or more chronic illnesses. By 2030, this number is expected to be more than 70 million, or one in five Americans.

Surgeons are perhaps uniquely suited for palliative care, Dr. Siegel stated, because they are committed to the primacy of patient welfare as a responsibility of professionalism, are comfortable with complex illness, and routinely encounter complex family dynamics within complex health care organizations.

Dr. Siegel described the role of palliative care using specific case studies. He noted a valuable resource for residents interested in this field published by the College and the Cunniff-Dixon Foundation titled Surgical Palliative Care: A Resident’s Guide. The guide serves as an educational tool to assist surgeons and residents in improving end-of-life care (see related article on page 19).

ACS and the rural surgeon

Phillip R. Caropreso, MD, FACS, a general surgeon from Keokuk, IA, provided a summary of previous educational programs in rural surgery undertaken by the College, including the previous rural surgery symposia.

Dr. Caropreso noted that more
than 15 definitions of “rural” are currently used by federal programs. Regardless of how rural surgery is defined, he said, there are a number of practical concerns for surgeons practicing in a rural environment, including resources, support, facilities, access to equipment, and service lines.

Dr. Caropreso applauded the College’s recognition of the needs of rural surgeons and urged rural surgeons to actively seek out and accept more leadership roles in the ACS, become proactive, and determine the content of future educational endeavors.

“It is time for rural surgeons to break the cycle of complacency, embrace technology, expand networking possibilities, and strive for leadership positions within the College and other surgical organizations. The time to act is now,” Dr. Caropreso concluded.

**Sheps Center**

Anthony Charles, MD, MPH, FACS, Research Fellow with the ACS Health Policy Research Institute (HPRI), Cecil B. Sheps Center for Health Services Research, University of North Carolina, Chapel Hill, addressed the work of the Sheps Center and current efforts under way on the center’s Rural Health Research Program. The program is based at the Sheps Center and encompasses the work history of highly influential researchers.

Dr. Charles described a number of research projects, including the results of “Migration of Rural Surgeons: Which Surgeons Move, and Why.” This study’s goals were to: analyze characteristics of surgeons who move to and from rural areas (N=2,101), understand the factors motivating surgeons to move to and from rural communities, and identify opportunities for policies or programs to retain or attract surgeons in rural places. Surgeons who relocated between 2006 and 2009 were examined (rural to urban movers, 55 percent; urban to rural, 45 percent).

The study found that a greater percentage of females moved to rural areas than moved away from, or stayed in, rural practice. Surgeons moving to rural areas were found to be significantly younger than those moving away. Surgeons moving away from rural areas were more likely to be foreign trained. Approximately 70 percent of moves were within the same region, and the average move was 471.5 miles.

Among the conclusions and policy implications of the study were the following: recruitment of surgeons to rural communities currently relies heavily on financial incentives, but retention is more complicated; policies facilitating favorable call schedules may provide the best possibility for retaining rural surgeons; and structural factors (for example, the “impending doom of private practice”) have an impact on surgeons moving both to and from rural areas.

Finally, Dr. Charles reviewed data regarding general surgeons in the U.S., population taken from the HPRI’s *The U. S. Atlas of the Surgical Workforce* (for more information, go to [http://www.aeshpri.org/atlas](http://www.aeshpri.org/atlas)).

**Surgeons in a rural critical care hospital**

Matthew B. Rossi, MD, FACS, Hopedale Medical Complex, Hopedale, IL, spoke on The Hopedale Experience: Surgeons As Primary Care Physicians in a Rural Critical Access Hospital. Dr. Rossi described Hopedale as a “small rural” farming community in central Illinois with a population of approximately 1,000. Hopedale Hospital, Dr. Rossi explained, was established in 1955 as not-for-profit 501(c)(3) with no government funding and a largely volunteer workforce.

The current Hopedale Medical Complex (HMC) has for primary care three general surgeons, one internist, four satellite offices, and averages 19.6 daily visits per surgeon. Dr. Rossi discussed common medical and surgical diagnoses at HMC as well as emergency room (ER) coverage (200 ER visits/month with excellent continuity of care).

Patient satisfaction scores, based on a Consumer Assessment of Healthcare Providers and Systems survey, included the following:

- **Satisfaction with physician:** 91.5%
- **Satisfaction with nursing:** 92.6%
- **Overall satisfaction rate:** 94.6%

Dr. Rossi noted the positive impact of having a general surgeon as primary care physician at HMC, including: high level of patient and family satisfaction; less duplication of testing; less “defensive medicine”; a less litigious environment; autonomy and efficiency for the surgeon; seamless postoperative and follow-up care; and minimized need for multiple consultants.

Finally, Dr. Rossi stated that the HMC experience demonstrates that excellent surgical outcomes are possible in low-volume rural centers. Surgeons readily function
as primary care physicians, he said, which may positively affect surgical outcomes and patient satisfaction rates. Minor changes in many general surgery residency programs would adequately prepare rural surgeons who could provide primary care medicine in the community, he added, and medical students should be encouraged to consider general surgery/primary care as an attractive option for the broadly trained surgeon wishing to practice in a rural community. “It is time to have serious discussions about creating a separate rural surgery tract within existing surgical residency programs,” Dr. Rossi said.

Transition from urban to rural practice
Randall S. Zuckerman, MD, FACS, attending surgeon, department of surgery, North Country Hospital, Newport, VT, spoke on Transition from Urban to Rural Practice: Alternate Staffing Models. Dr. Zuckerman told the audience his personal “story”—suburban upbringing, Dartmouth Medical School, and broad training at Bassett Healthcare and New Haven’s Hospital of Saint Raphael—a 500-bed urban hospital with a mix of private practice and faculty and an extremely competitive environment.

Dr. Zuckerman left Saint Raphael, he said, for many reasons, with a one-year noncompete contract. His “Plan B” ended up being North Country Hospital (NCH)—a 25-bed critical access hospital serving a large geographic rural area. NCH has 41 physicians and two surgeons “who do almost everything,” Dr. Zuckerman said, including general surgery, vascular, trauma, hand, plastics, thoracic, endoscopy, and some urology. “Very little gets sent away,” he said.

Rural practice is different, Dr. Zuckerman said, on a number of levels. Patients don’t want to leave the area for care. Also, “There are no residents, so very sick patients really take it out of you,” he said. “And sometimes there is not as much help as you would like.” There is a lack of ancillary services and, Dr. Zuckerman noted, he really had to expand his medical skill set.

Dr. Zuckerman found he liked working in a rural environment and wanted the experience. His family was happy living in the Connecticut suburbs, so the solution, he decided, was to figure out a way to concentrate his work into discrete chunks of time. He realized that he did not necessarily need to live where he worked. So now Dr. Zuckerman works a week on and a week off, is employed by the hospital, and builds an elective practice in his off time. “Working in a rural hospital has been very challenging and rewarding,” Dr. Zuckerman said. “This model is not for everyone, but certainly could work in other rural environments.”

ACS update
LaMar S. McGinnis, Jr., MD, FACS, a Past-President of the College (2009–2010), provided an update of current ACS programs, including the Inspiring Quality initiative, Surgical Education and Self-Assessment Program™ (SESAP™), the HPRI, and College publications—including the Bulletin, Journal of the American College of Surgeons, and Surgery News.

Dr. McGinnis told the audience that the College has proven models of patient care and quality improvement fundamentals in its program, such as accreditation through the ACS Commission on Cancer and Committee on Trauma, and the verification process and databases used for the ACS National Surgical Quality Improvement Program (ACS NSQIP®). “By working together with health care leaders around the nation, the College, through its quality programs, continues to have a tremendous impact on improving care and leading our health care system in the right direction,” Dr. McGinnis said.

Pay for performance/rural America
John A. Weigelt, MD, FACS, dean of clinical quality, Medical College of Wisconsin, Milwaukee, spoke on Pay for Performance in Rural America. Dr. Weigelt defined pay for performance, which is a collaboration between providers and payors, appropriate quality measures, and rewards for “getting it right,” and the Physician Quality Reporting Initiative (PQRI), which analyzes process measures and demonstration projects. He discussed the 2011 changes in pay for performance/PQRI, including those involving registry reporting (minimum number only Medicare patients); claims reporting (measures for Medicare fee-for-service patients); and group reporting.

A full summary of Dr. Weigelt’s presentation is provided via webcast at http://www.acs-resource.org, or e-mail elearning@facs.org.

Specialty procedures/rural surgeons
Robert P. Sticca, MD, FACS, chairman and program director, and professor of surgery, School
of Medicine and Health Sciences, University of North Dakota, Grand Forks, addressed Specialty Procedures Performed by Rural Surgeons.

Dr. Sticca noted that there are few studies with actual data regarding procedures performed by rural surgeons, and that often these studies use second- and third-hand data. He described the parameters and results of a study undertaken by the University of North Dakota with the North and South Dakota medical boards with licensed general surgeons in a rural practice location. Current Procedural Terminology data was compiled regarding office and operating room (OR) procedure codes from January 1 through December 30, 2006. All procedure codes—inpatient, outpatient, office, outreach—were included.

Dr. Sticca discussed the top 10 specialty procedures identified by the study. These were the following (percentage of specialty procedures, N=5,555): OR vascular, 19 percent; non-OR vascular, 8.2 percent; incision of pleura/drainage, cardiothoracic, 5.5 percent; muscle/tendons, orthopaedic, 5.4 percent; non-OR therapeutic, male, urology, 4.8 percent; cesarean section, ob/gyn, 4.5 percent; decompression of peripheral nerve, neurosurgery, 3.3 percent; hysterectomy, obstetrics/gynecology, 3.3 percent; varicose vein stripping, vascular, 3.2 percent; and tubal ligation, ob/gyn, 2.6 percent.

Among the conclusions of the study, according to Dr. Sticca, were that specialty procedures are an important part of rural surgery practice; that rural surgeons should get broad-based training in endoscopy, orthopaedics, ob/gyn, vascular, thoracic, and urology; and that specialty procedure data should be used to guide the training of rural surgeons.

Resident work hours

Dr. Borgstrom addressed Changing Paradigms of Surgical Education. He began with a summary of events surrounding New York State Department of Health Code, Section 405, also known as the Libby Zion law—a regulation that limits the amount of resident physicians’ work in New York State hospitals to roughly 80 hours per week. The law was named after Libby Zion, who died at the age of 18 while under the care of resident physicians and intern physicians. A controversy arose as to whether the residents were overworked.

In July 2003 the Accreditation Council for Graduate Medical Education (ACGME) adopted similar regulations for all accredited medical training institutions in the U.S. The ACGME regulations necessitated an 80-hour workweek, 10 hours off between shifts, 30-hour shift (six hours for transition), and 24 hours off per week (average over four weeks). Dr. Borgstrom said that work hours regulations for 2011 provide for an 80-hour workweek (averaged, moonlighting included), average one 24-hour period off per week, and a PGY-1 should have 10 and must have eight hours between shifts.

Dr. Borgstrom summarized the College’s response to a 2010 article in the New England Journal of Medicine regarding sleep deprivation, elective surgical procedures, and informed consent (see boxed item, this page).

ACS response to New England Journal of Medicine article

In response to the 2010 article in the New England Journal of Medicine, “Sleep Deprivation, Elective Surgical Procedures, and Informed Consent,” by Michael Nurok, MD, PhD; Charles A. Czeisler, PhD, MD; and Lisa Soleymani Lehmann, MD, PhD (New Eng J Med. 2010; 363:2577-2579), College officials wrote:

The article...in this issue of the Journal is a timely one that clearly articulates the surgical profession’s concerns about the effects of sleep deprivation on performance. The American College of Surgeons (ACS) agrees that fatigue has a detrimental effect on both cognitive and technical performance; however, we believe that the solution the authors offer—mandatory disclosure—is unwarranted. Rather, we maintain that surgeons should be trained to identify and address this problem.

Surgeons who meet the ACS’s standards of professionalism and ethics are committed to delivering safe surgical care in an optimal environment, to acting transparently, and to accepting accountability for patient outcomes. Professionals of this caliber are likely to view the authors’ recommendation that surgeons be required to disclose the number of hours they have slept as oppressive and insidious. Many other factors—including marital difficulties, an ill child, financial worries, and so on—negatively affect performance. Are we going to demand full disclosure of these problems as well?

Carlos A. Pellegrini, MD, FACS
L.D. Britt, MD, MPH, FACS
David B. Hoyt, MD, FACS
American College of Surgeons, Chicago, IL
Educating rural surgeons

The first day concluded with a panel discussion on Educating Surgeons for Rural America. Panelists for this session were Karen E. Deveney, MD, FACS, program director, general surgery residency, Oregon Health and Science University (OHSU), Portland, OR; Thomas H. Cogbill, MD, FACS, program director emeritus, general surgery residency, Gundersen Lutheran Medical Foundation, LaCrosse, WI; and Dr. Sticca.

Dr. Deveney described the nine-year evolution of the general surgery training program for rural practice at OHSU. The training program takes place at Three Rivers Community Hospital, Grants Pass, OR—a community of 23,000, three-and-one-half hours south of Portland with a “rural feel” (forests, wild and scenic river, and so on). Three Rivers is a high-quality hospital and ambulatory surgery center with seven board-certified general surgeons and specialists in gynecology, orthopaedics, urology, and otolaryngology. “These surgeons are all eager to mentor a senior surgical resident,” Dr. Deveney said.

The OHSU program entails six months’ training in general surgery (includes vascular, thoracic, endoscopy) and one-and-a-half months each in urology, gynecology, otolaryngology, and orthopaedics. Some of the ancillary benefits of training in a rural setting, according to Dr. Deveney, are that it models what rural practice will be like working with partners, interacting with referring physicians, attending to billing and office management, and ensuring continuity of care.

Of the 12 residents who have completed the program, only two are practicing in truly rural settings, Dr. Deveney said. Three are in large rural areas (population 27,000 or more); three are in metro areas; one is in a large city; and three who are not yet in practice plan to locate to a large rural site. “The bottom line,” Dr. Deveney said, “is that in spite of the program not all will enter truly rural practice.” Future plans for the program include developing “grow your own” programs to encourage rural kids to become rural surgeons and debt repayment programs for commitment to practice in rural hospitals.

Dr. Cogbill reported on the rural surgery curriculum at Gundersen Lutheran, which has a strong core in general surgery, high-volume endoscopy (PGY 3 and 4), a two-month obstetrics/gynecology rotation for PGY 3, and a rural surgery elective, PGY 4.

Of 19 Gundersen graduates from 2002 to 2011, five now serve in small rural communities (10,000 or less), seven serve as general surgeons in large rural/urban settings, and seven have received fellowships for further education.

An international rotation was established in 2009 with sites in the Dominican Republic, Ecuador, Tanzania, and Kenya. To date four residents have served in this rotation, encountering cases involving skin lesions, hernia, plastic surgery, obstetrics and gynecology, urology, and thyroidectomy, Dr. Cogbill said.

Dr. Sticca discussed the general/rural surgery training at the University of North Dakota (UND). Rural surgery demands truly general surgeons with a different skill set, Dr. Sticca noted. Broad-based training should include all areas of general surgery, selected specialties, endoscopy, and trauma/critical care. The rural surgery tract at UND includes nine months that are different than standard general surgery training, emphasizes specialty basic and emergency skills, and includes specific rural, endoscopy, and specialty rotations (plastic surgery/wound management, anesthesia, critical care, hand surgery, and advanced endoscopy).

Some of the barriers to rural surgery education, according to Dr. Sticca, include acceptance of rural surgery practice as unique, guidelines by the American Board of Surgery, work hours guidelines, and the number of general surgery residency positions available.

At the end of his presentation, Dr. Sticca posed these questions for consideration: Is additional training (more than five years) necessary? Should rural surgery training be incorporated into general surgery training (rural tract)? Is there a need for a separate certification in rural surgery?

Rural practice, urban partner

Robert P. Marshall, MD, FACS, Alamosa, CO, spoke on Integrating a Rural Practice with an Urban Partner. Dr. Marshall stated that the reality facing rural surgery today is that resources available to surgeons in rural practice are limited. The scarce resources include funding, physicians, nurses, radiology, specialty services, technical support, and medical consultants.

Dr. Marshall said that “patient out-migration” often occurs in rural settings due to the lack of services locally, the perceived lack of quality, the reality of super-specialists, and state-of-the-art equipment and cutting edge technology that can be found in urban settings. A potential solution, Dr. Marshall said, may lie in
finding an “upstream partner—someone to share one’s vision, and a willingness to demonstrate quality and a commitment to state-of-the-art care and outreach to specialty services through urban partnerships.” He discussed a number of such partnerships undertaken in his area with trauma hospitals, radiology groups, breast centers, oncology and cardiology clinics, and off-site affiliations with neurosurgeons and vascular surgeons.

Dr. Marshall said he believes the future of rural practice lies in considering what type of arrangement best suits the needs of that practice—partnerships, full integration, affiliates, freestanding off-sites, and so forth. Moving forward, he said, rural surgeons must focus on quality first, find situations advantageous to all parties, consider part-time and full-time solutions, stay connected, and be flexible when considering upstream partners.

Economic impact

Gerald Doeksen, PhD, director of the National Center for Rural Health Works, and regents professor of agricultural economics, Oklahoma State University, Stillwater, spoke on the Economic Impact of a General Surgeon to a Rural Community. Dr. Doeksen discussed his work to measure the economic contribution of a general surgeon to a rural community, and to assess a community’s ability to support a general surgeon.

He addressed the direct impact of a rural general surgeon in the office and hospital. Analyzing data (2007) from a Medical Group Management Association (MGMA) Physician Compensation and Production Survey, Dr. Doeksen cited figures and statistics regarding the positive direct and secondary economic impacts of a general surgeon on the community’s economic system.

“The bottom line is that one general surgeon in a rural community has a definite positive impact on the economics of that community,” Dr. Doeksen said. He described a number of assessment tools to determine a community’s ability to support general surgery services. These tools are available on the center’s website, http://www.ruralhealthworks.org.

Collaborative efforts

Jonathan Sprague, president, Rocky Coast Consulting, Bangor, ME, discussed the Status of Collaborative Efforts to Address Rural General Surgery. Mr. Sprague described the dynamics of a number of multiparty projects and initiatives that seek to strengthen rural general surgery. His overview of initiatives included the National Rural Health Association’s Rural General Surgery Workgroup, the National Organization of State Offices of Rural Health Rural General Surgery Workgroup, the ACS HPRI, the Mithoefer Center for Rural Surgery, and rural projects currently under way in Wisconsin and Maine to ensure access to general surgery services and strengthen rural delivery systems.

Mr. Sprague offered a number of “core findings,” from the projects. Rural general surgery is a “primary” or fundamental building block of sustainable rural health systems and this should be a core advocacy principle, he said. Also, there is too much “silo-ing”—groups do not share information/data/studies.

Mr. Sprague noted that rural general surgeons have too little voice at the federal and state association levels and that there is a critical need for substantially expanded dialogue and multiparty strategies and partnerships. He also stated that rural surgeons should strive to create a multiorganization “movement” while focusing on short-term projects.

Mr. Sprague offered a number of recommendations for creating a rural surgery movement (see boxed item, this page).

**Recommendations for creating a rural surgery movement**

- Support the development of the Rural General Surgery Coalition
- Support the concept that rural general surgery is a fundamental building block of sustainable rural health systems
- Further promote greater understanding of rural general surgery issues and the significant implications for rural communities
- Identify or create, and then advocate for, strategies that will enhance incentives for medical schools and surgical residency programs to address rural surgery
- Identify all members of the U.S. Congress with surgery-relevant backgrounds (including primary care) and work with partners to engage their support
- Promote attention to the need for adequate reimbursement for rural surgical services
- Promote the need for rural delivery systems reform—not just workforce development solutions—and support the identification of best systems practices or delivery models
Following the rural surgery symposium, a two-day skills course was held. The sold-out course included Web-based didactic material that the 25 participants completed in advance. The on-site portion of the training was held in the Northwestern University Center for Simulation Technology and Immersive Learning. The program used immersive simulation and hands-on mentored practice to present modules in surgical leadership, advanced endoscopic techniques, emergency gynecological surgery, urology for the rural surgeon, and plastic surgery for the rural surgeon.

Participants performed endomucosal resection of polyps and learned laparoscopic management of ectopic pregnancy and ovarian torsion. They practiced suprapubic tube insertions, ureteral repair, and management of testicular torsion. Each participant also performed lesion excision and flap repair of defects on cadaver head models.

Module directors and faculty are listed in the figure at right.

Feedback from course participants was outstanding. Listed are some of the responses that were received at the conclusion of the skills set.

Congratulations to everyone behind this. I was really impressed with the instructors. The course content was practical, well taught, and accompanied by outstanding simulations. The folks in the simulation lab are geniuses!

If all the College meetings were like this, I’d be in all of them. I was really impressed with the instructors, who took their time to teach us on a one-to-one basis. We could probably include new topics such as management of diverticulitis, etc. Kudos to everyone involved in making this event happen.

Advanced Skills Training: Modules and faculty

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<td>Kelly Maxwell, MD</td>
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<th>Plastic Surgery for the Rural Surgeon</th>
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Acquiring new skills

Ajit K. Sachdeva, MD, FACS, FRCS, Director of the ACS Division of Education, Chicago, IL, addressed How Should Practicing Surgeons Acquire New Skills?

Dr. Sachdeva said that today’s practicing surgeon must endure the winds of change in the medical/health environment, including the continuous advances and development of new procedures and technologies, the intense focus on quality and outcome measures for patient safety, the evolving regulations for credentialing, privileges, Maintenance of Certification requirements, and the changes in practice patterns that will occur throughout their professional careers.

Following residency, Dr. Sachdeva said, the keys to acquiring new surgical skills are to determine the right time for training and selecting the most appropriate training program. “It can be challenging to locate suitable educational resources to address specific needs and to take time away from busy practices,” he said.

Dr. Sachdeva noted current ACS efforts to address the acquisition of surgical skills and to keep the practicing surgeon up to speed on the latest medical and scientific information, including Selected Readings in General Surgery (SRGS) and its online companion, SRGS Connect; the Fundamentals of Laparoscopic Surgery sessions and ACS webcasts from Clinical Congress; the ACS Multimedia Atlas of Surgery; and the ACS Accredited Education Institutes.

Rural surgery update

Dr. Hughes, from Memorial Hospital, McPherson, KS, provided an ACS Rural Surgery Update.

“Today is launch day for the ACS Rural Surgery Pilot Project online,” Dr. Hughes said. “While we were busy in the OR, Facebook, eHarmony, Twitter, MySpace, and the Blogosphere happened, and it happened quickly,” he said. It took radio 50 years to acquire 50 million users, television took 13 years, the Internet took four years, and Facebook had 100 million users in nine months.

The goals of the College’s pilot project online, Dr. Hughes explained, are:

• Easy access to the excellent content of the ACS Web portal
• Rapid dissemination of effective practices
• Discussion and comparison of results on a real-time basis
• Avoidance of making the mistakes of others
• Widening one’s professional cadre
• Learning rapidly from others, rapid teaching of others
• Effective, immediate contact with ACS leadership
• Making Fellowship in ACS more relevant and real

Dr. Hughes demonstrated the utility of the Rural Surgeons Community site and how to take advantage of the wealth of information contained therein.

ACS NSQIP

Samuel R. Finlayson, MD, FACS, Dartmouth-Hitchcock Medical Center, Lebanon, NH, spoke about Rural ACS NSQIP. Dr. Finlayson discussed the genesis of the program, which originated in Veteran Affairs as the result of a congressional mandate. The program was piloted in the private sector and then rolled out by the College. It is the first nationally validated, outcomes-based program to measure and improve the quality of surgical care.

NSQIP’s track record of success is well-documented in peer-reviewed surgical literature, and the program includes more than 300 enrolled hospitals. Dr. Finlayson said that this year the program was made available in a format specifically designed to meet the needs of small rural hospitals. It is now available in four formats—classic (original), essentials, small and rural, and procedure targeted. Dr. Finlayson discussed the nuances of each format.

Active engagement benefits of the program include periodic site visits, one-to-one support services, online training and testing, surgical clinical reviewer and surgeon champion conference calls, regional collaboratives, and the annual ACS NSQIP National conference.

Additional information on ACS NSQIP is available at http://www.facs.org/cqi/outcomes.html.

Mr. Regnier is Editor, Bulletin of the American College of Surgeons, Division of Integrated Communications, Chicago, IL.
The American College of Surgeons (ACS) Archives has many photos with no identifications. The archivists hope that Bulletin readers may be able to help to properly identify people and places and events depicted in the photos.

The image on this page was found amid records of the Commission on Cancer from the late 1960s and early 1970s. If you think you know any of these men, or the time period, place, and circumstances of this photo, contact Susan Rishworth, ACS Archivist, at 312-202-5270 or srishworth@facs.org.
$750,000 grant funds physician shortage tracking tool

The Cecil G. Sheps Center for Health Services Research at the University of North Carolina (UNC) at Chapel Hill has received a $750,000 grant from the Physicians Foundation to develop an online tool to track ongoing physician workforce needs across the country. The foundation is a nonprofit organization that seeks to advance the work of practicing physicians and improve the quality of health care for all Americans.

“Most experts agree the nation is facing a shortage of doctors, but we don’t know how many, in what specialties and in which geographies we’ll fall short,” said Erin P. Fraher, PhD, MPP, director of the North Carolina Health Professions Data System at the Sheps Center. “This model represents an important step in fostering quality health-care delivery to all patients across America,” said Dr. Fraher, who is also the Associate Director of the American College of Surgeons Health Policy Research Institute.

The Affordable Care Act seeks to extend insurance to more than 30 million people. Given the influx of new patients, policymakers and health providers will need access to real-time data on the locations where physician shortages will be most problematic at the local, state, and national levels.

The project will use data from a wide variety of sources, including the American Medical Association and the Centers for Medicare & Medicaid Services. Once the data are assembled, UNC, the Physicians Foundation, and a clinical advisory group composed of practicing physicians will work collaboratively to develop a model that enables users to estimate physician supply and demand within a set geography and/or specialty. Additionally, users will be able to incorporate multiple scenarios to evaluate physician workforce needs and the sensitivity of projections impacted by policy changes. The Web-based projection model will be continually updated with new data.

The project runs from July 1, 2011, to June 30, 2013, and according to Dr. Fraher, a draft of the tool will be ready to demo by early 2013.

Managing the transition between clinical and nonclinical roles to be addressed at Congress

A panel session (PS 219) at this year’s Clinical Congress will address strategies for surgeons in managing the transition between clinical and nonclinical roles. The session, titled Surgeons As Leaders: Strategies for Managing the Transition Between Clinical and Nonclinical Roles, will take place Tuesday, October 25, at the Moscone Center in San Francisco, CA.

Former U.S. Surgeon General Richard H. Carmona, MD, FACS, MPH, and Health Minister of the United Kingdom, Lord Ara W. Darzi, MD, FACS, Hon FREng, FMedSci, will speak on their personal transitions between clinical surgical roles and nonclinical leadership roles. They will be joined by Jo Buyske, MD, FACS, director of the American Board of Surgery, and Myriam J. Curet, MD, FACS, chief medical advisor for Intuitive Surgical Inc., who will offer additional perspectives on this topic.

The panel will explore the leadership role that surgeons can have both in and out of the operating room. Specific discussion points will include the following: What leadership skills are necessary for these transitions? And does surgery provide adequate experience in these leadership areas that is applicable outside of the hospital? In addition, time away from the clinical practice and re-entry into practice after a professional hiatus will be discussed. This session should interest any surgeons who wish to learn about leadership opportunities available outside of surgery, and the process by which practice can be continued when exploring other opportunities.
We reward loyalty. We applaud dedication. We believe doctors deserve more than a little gratitude. We do what no other insurer does. We proudly present the Tribute® Plan. We go way beyond dividends. We reward years spent practicing good medicine. We salute a great career. We give a standing ovation. We are your biggest fans. We are The Doctors Company.

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American College of Surgeons
The American College of Surgeons Oncology Group (ACOSOG) is pleased to announce the start of a new chapter in the history of the group. In large part, this new chapter was ushered in by the Institute of Medicine (IOM) when it released a report last year strongly recommending a major restructuring of the NIH-funded cooperative groups. The IOM critically appraised the cooperative groups’ clinical trials infrastructure, and summarized four key goals and outlined 12 specific recommendations for restructuring clinical trials (see table, this page). In essence, the IOM realized that it was time to reinvent the cooperative groups in order to deliver “better studies faster.” ACOSOG and the North Central Cancer Treatment Group (NCCTG) were already in the process of consolidating their Statistics and Data Center (see table, Goal I, item b), and were soon joined by Cancer and Leukemia Group B (CALGB) when Daniel Sargent, MD, became the lead statistician for CALGB. At that point, it seemed like a logical choice for these three groups to consolidate their operations, membership, and scientific activities. The official name of this new group is the Alliance for Clinical Trials In ONcology, ACTION for short, but affectionately referred to as the “Alliance.”

ACOSOG would like to introduce its new partners—CALGB and the NCCTG. The origins of CALGB date back to the early 1950s, when researchers envisioned that successful chemotherapeutic management of hematopoietic malignancies could, in fact, be realized. In 1956, Acute Leukemia Group B (CALGB) when Daniel Sargent, MD, became the lead statistician for CALGB. At that point, it seemed like a logical choice for these three groups to consolidate their operations, membership, and scientific activities. The official name of this new group is the Alliance for Clinical Trials In ONcology, ACTION for short, but affectionately referred to as the “Alliance.”

### Summary of the committee’s goals and recommendations (Institute of Medicine)

**Goal 1**

**Improve the speed and efficiency of the design, initiation, and conduct of clinical trials**

- a. Consolidate front office operations based on peer review
- b. Consolidate back office operations and improve processes
- c. Streamline and harmonize government oversights
- d. Improve collaboration among stakeholders

**Goal 2**

**Incorporate innovative science and trial design into cancer clinical trials**

- a. Improve support and use of biorepositories
- b. Develop and evaluate novel trial designs
- c. Develop standards for new technologies

**Goal 3**

**Improve the means of prioritization, selection, support, and completion of cancer clinical trials**

- a. Reevaluate the role of National Cancer Institute in the clinical trials system
- b. Increase trial accrual, diversity, and speed of clinical trials
- c. Increase funding for the NCI cooperative group program

**Goal 4**

**Incentivize the participation of patients and physicians in clinical trials**

- a. Increase support for clinical investigators
- b. Better cover the costs of patient care in clinical trials

Adapted from A National Cancer Clinical Trials System for the 21st Century: Reinvigorating the NCI Cooperative Group Program. Available at: [http://www.nap.edu/catalog/12879.html](http://www.nap.edu/catalog/12879.html).
Leukemia Group A—attracted the efforts of more investigators and the expansion of the scope of the research. By 1976, the Acute Leukemia Group B elected to change its name to Cancer and Leukemia Group B, recognizing the addition of research in a broad spectrum of neoplastic diseases, and the importance of multidisciplinary treatments. The NCCTG was founded in 1977 based on the premise that community oncology practice is an appropriate venue to conduct cancer clinical trials. Through a network of outstanding oncology centers, NCCTG brought multidisciplinary cancer treatment and control studies to patients receiving care in communities throughout the nation.

The scientific integration and operational consolidation of ACOSOG, CALGB, and the NCCTG is specifically being designed to address the changing needs of cancer clinical trials. The new group will have to address the fact that the complexity of clinical research for patients with neoplastic diseases has increased dramatically over the past five decades. Options for cancer care have multiplied, and promising advances in the field of translational research demand adaptation of the trials infrastructure.

The three cooperative groups have been working steadily over the past six months with transition teams (populated by representatives from each of the three groups) meeting frequently to ensure a smooth and productive process of consolidation. The teams have accomplished the following: created a vision and mission; adopted a new group name; drafted a comprehensive constitution, bylaws, and transition plan; and articulated and approved a new membership model. A new constitution and bylaws were ratified when the transition board of directors met for the first time July 15, 2011. At that same meeting, the board of directors elected Monica Bertagnolli, MD, FACS, a co-author of this article, as the transition group chair. These transition leaders will serve until the new grant is awarded in 2014.

It is important for all existing ACOSOG members to continue to participate in ACOSOG, NCCTG, and CALGB trials. Site management will continue as “business as usual” for the foreseeable future. Over the three-year transitional period, ACTION leadership will assist current ACOSOG members in the process of joining the newly formed group.

The authors hope all ACOSOG members and surgeons interested in joining the alliance will mark their calendar for the first meeting of ACTION, November 17–19, at the InterContinental Chicago O’Hare hotel in Chicago, IL.

Future issues of the Bulletin will provide updates on ACTION and its relationship with the American College of Surgeons, as well as new information regarding ACOSOG’s Community Clinical Oncology Program research agenda.

Dr. Ota, of Durham, NC, and Dr. Nelson, of Rochester, MN, are ACOSOG Co-Chairs.

Dr. Bertagnolli is chief, division of surgical oncology, Brigham and Women’s Hospital, and professor of surgery, Harvard Medical School, Dana-Farber Cancer Institute, Boston, MA.

Dr. Buckner is professor of oncology, Mayo Clinic College of Medicine, Rochester, MN.

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**Did you know...**

The Commission on Cancer (CoC) of the American College of Surgeons (ACS) is offering a two-year fellowship in surgical oncology outcomes and health services research beginning July 1, 2012? The CoC has one position available every two years for a surgical resident who has completed two or three years of clinical training in the U.S. or Canada. The fellow will work within the Cancer Programs of the ACS to conduct clinical research and further the research agenda of the CoC’s National Cancer Data Base (NCDB) with the goal of improving the quality of care for the cancer patient. The application deadline is November 1, 2011.

Details about the Scholar-in-Residence Program can be found on the CoC website at [http://www.facs.org/cancer/canews.html](http://www.facs.org/cancer/canews.html). Program questions and completed applications with supporting documentation should be directed to the ACS Administrative Director of Cancer Programs at cbura@facs.org.
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Earlier this year, The Joint Commission Center for Transforming Healthcare released a set of targeted solutions to reduce the risk of wrong site surgery. Health care professionals agree that wrong site surgery is a serious and preventable adverse event that should never occur in any setting. The issue of wrong site surgery involves all health care settings in which invasive procedures are performed, ranging from dental to heart operations, and does not impact surgeons alone.

Although wrong site surgery reporting is not mandatory in most states, some estimates put the national incidence rate—which includes wrong patient, wrong procedure, wrong site, and wrong side surgeries—as high as 40 incidents per week. Recognizing this as a critical patient safety issue, eight U.S. hospitals and ambulatory surgical centers teamed up with the center to address the problem (see box, this page). The center and the participating organizations used tools such as Lean Six Sigma and change management to discover the causes of—and put a stop to—these preventable breakdowns in patient care.

The participating hospitals and ambulatory surgical centers found that problems with scheduling and pre-op/holding processes, as well as ineffective communication and distractions in the operating room, contributed to increased risk of wrong site surgery. In addition, a time out without full participation of key operating room staff to take a moment to confirm that the correct patient, site, and procedure have been verified before surgery was identified as another contributing factor that increased risk. These contributing factors, which can potentially compromise patient safety, vary by organization and by event.

By reinforcing quality and measurement, emphasizing a culture of safety, strengthening knowledge about wrong site surgery, and improving consistency in surgical processes, the eight participating health care organizations and the center found that opportunities for errors or defects could be reduced. The focus on eliminating defects is important because a single operative case has multiple opportunities for defects to occur. Multiple defects in a single operative case can further increase the risk of an error reaching the patient. For example, addressing documentation and verification issues in the pre-op/holding areas decreased defective cases from a baseline of 52 percent to 19 percent.

Defects increase the risks for, and can lead to, wrong site surgery. In turn, the incidence of cases containing more than one defect decreased 72 percent. Additionally, it was discovered that defective cases occurred more frequently when more than one procedure was being performed.

This project addresses the problem of wrong site surgery through Robust Process Improvement™ (RPI) methods. RPI is a fact-based, systematic, and data-driven problem-solving methodology. This method incorporates tools and concepts from Lean Six Sigma and change management methodologies. (For more information on RPI, see the July 2011 issue of the Bulletin.*) Using RPI, the project teams measure the magnitude of the problem (or, in the case of wrong site surgery, specific problems that

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**Participating organizations**

- AnMed Health, Anderson, SC
- Center for Health Ambulatory Surgery Center, Peoria, IL
- Holy Spirit Hospital, Camp Hill, PA
- La Veta Surgical Center, Orange, CA
- Lifespan-Rhode Island Hospital, Providence, RI
- The Mount Sinai Medical Center, New York, NY
- Seven Hills Surgery Center, Henderson, NV
- Thomas Jefferson University Hospitals, Philadelphia, PA
increase the risk of this event), pinpoint the contributing causes, develop specific solutions that are targeted to each cause, and thoroughly test the solutions. Although invasive surgical procedures occur in many settings, the scope of this project included all procedures performed in the operating room and regional blocks performed by anesthesia either in the preoperative area or the operating room. Within the project scope, the time frame begins at the time a procedure is scheduled for surgery and ends with incision.

As stated earlier in this article, wrong site surgery includes invasive procedures on the wrong patient as well as wrong procedure, wrong site, and wrong side surgeries. The Joint Commission has been at the forefront of the wrong site surgery issue for many years by issuing *Surgery Event Alert* newsletters on the topic of wrong site surgery, specifically, *Sentinel Event Alert* (issue 6), “Lessons learned: Wrong site surgery,” published in 1998, and *Sentinel Event Alert* (issue 24), “A follow-up review of wrong site surgery,” published in 2001. The Joint Commission later convened a wrong site surgery summit in 2003 that led to the development of the Universal Protocol—a standardized approach to eliminating wrong site surgery. Use of the Universal Protocol—which includes a pre-procedure verification, site marking, and a time out—is a requirement for Joint Commission-accredited hospitals, ambulatory care, and office-based surgery facilities.

In addition to wrong site surgery, the center is working to reduce surgical site infections following colorectal surgery through a project launched in August 2010 in collaboration with the American College of Surgeons. The recommendations from this collaborative project are expected to be published in early 2012.

All Joint Commission-accredited health care organizations have access to the solutions through the Targeted Solutions Tool™ (TST), which provides a step-by-step process to measure performance, identify barriers to excellent performance, and implement the center’s proven solutions that are customized to address an organization’s specific barriers. (For more information on the TST process, see the December 2010 issue of the *Bulletin.* The first set of targeted solutions, created by eight of the country’s leading hospitals and health care systems working in collaboration with the center, focuses on improving hand hygiene. (For more information on improving hand hygiene, see the April 2011 issue of the *Bulletin.* Accredited organizations can access the TST and hand hygiene solutions on their secure Joint Commission Connect extranet.

Targeted solutions for wrong site surgery are expected to be added to the TST this fall. Solutions for hand-off communications—another center project—are expected to be added later this year. Future projects are expected to focus on medication errors and other aspects of infection control.

For more information on the Center for Transforming Healthcare’s wrong site surgery project and other center projects, visit [http://www.centerfortransforminghealthcare.org/](http://www.centerfortransforminghealthcare.org/).

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The following comments were received in the mail or via e-mail regarding recent articles and columns published in the Bulletin. Letters should be sent with the writer’s name, address, e-mail address, and daytime telephone number via e-mail to sregnier@fas.org, or via mail to Stephen Regnier, Editor, Bulletin, American College of Surgeons, 633 N. Saint Clair St., Chicago, IL 60611. Letters may be edited for length or clarity. Permission to publish letters is assumed unless the author indicates otherwise.

Physicians need to find their collective voice

Dr. Kavanagh addresses a critical issue that lies at the root of health care reform in his article titled “Health care integration: Will physicians lose their voice?” in the June 2011 issue of the Bulletin (Bull Am Coll Surg. 2011;96[6]:28-30) regarding health care integration and the threat of physicians losing their voice. He is correct in pointing out the unsustainable financial path that our nation’s Medicare system has been meandering along over the past 45 years. Current estimates suggest that unfunded Medicare liabilities now total more than $95 trillion. This represents, by far, the largest unfunded mandate on our nation’s unofficial ledger.

The purported savings estimates of the Affordable Care Act, which will not likely materialize, are minuscule when compared to the realities we must confront in order to protect the health care interests of our children and future generations of Americans. The term “integration” appears across the health care landscape under different circumstances. As noted in the article, general integration of providers of care with administrators and other non-providers is an employment model that is favored by most proponents of reform. What this represents is another in a series of attempts to eliminate the private practice of medicine and surgery. This is occurring at an accelerated pace as the legislative and regulatory burdens imposed on private practitioners have grown to overwhelming proportions. Today, a fast growing majority of physicians are employees of larger entities.

More specifically, the proposed final rule regarding the accountable care organizations (ACOs) calls for integration of Medicare Part A and Part B. This should be understood as a call for elimination of Medicare Part B, which was established in 1965 as a means to cover physician service provision. Over the past several decades, Medicare Part B has been successfully raided by other interests to the point that only about 38 cents on every dollar expended by Medicare Part B is directed to physician service coverage. By integrating Medicare Parts A and B under the direction of administrative personnel, physicians will be effectively removed from control of reimbursement, not only for services provided, but also for quality and value added care rendered.

Physician reimbursements, which are largely inadequate under the existing Medicare schedule, have faced, and continue to face, regular challenges. Those challenges are increasing in number and complexity, and include not only the sustainable growth rate iterations, but also such entities as the Independent Payment Advisory Board, ACOs, “bundling” arrangements, and “pay for...” performance, quality, value, and so on, schemes. There is an unstated incorrect assumption by those who are directing health care reform, in large part driven by special interest agendas, that by removing independent physicians from positions of control over patient care, quality can be improved while costs are decreased.

It needs to be understood by policymakers and regulators that the largest sector of the medical economy is not physician payments or physician reimbursements, that the costs of service provision is largely determined by non-provider dimensions of care, and that fraud and waste are far more disruptive than are payment schedules to honorable providers of care. Policymakers and regulators should also be aware of the fact that over the past quarter-century the health care administrative cohort has grown at a rate nearly 100 times greater than the rate of growth in the numbers of doctors and nurses. Health care reformers are pointing their financial fingers in the wrong direction and will, thereby, guarantee failure of health care reform over the long run.

Returning to the specifics of Dr. Kavanagh’s article, it is clear that physician voices already have been muffled and will soon be muted. This is a result of “divide and conquer” strategies successfully employed by powerful special interests who recognize that physicians are separated into different communities based on diverse specialty and subspecialty groupings, differing practice models (private, corporate, hospital, academic, government, and so on), and dissimilar reimbursement models (fee-for-service, capitation, salary, incentive, and so on). No one group can effectively advocate for the entire spectrum.

Dr. Kavanagh’s concluding paragraph is on point but not achievable. Physicians have effectively abdicated positions of leadership, are increasingly seeking employment (trade) models of practice, and will be overrun by facility administrators whose bottom line is the financial bottom line and not quality of patient care. The current medical-political climate is such that financial concerns trump quality of care issues.

There is hope on the horizon, but it will require strength and commitment by physicians and physician groups on the national political level to address root causation rather than symptoms, to act from a cooperative rather than adversarial viewpoint, to employ systems-oriented thinking rather than linear analysis, and to be-
come proactive rather than reactive in advocating for health care reform.

Dan F. Kopen, MD, FACS, Forty Fort, PA

One instrument, many functions

Laparoscopic surgery in the abdomen, chest, or the joint is a minimally invasive surgery and it is improving every day; however, the instrumentation is a major source of frustration for the surgeon.

Typically every instrument has only one function and the surgeon needs to exchange the instrument every time a different function is required. When we exchange the instrument though the trocar we have to move our eyes away from the monitor, and this can be time-consuming and frustrating because the exposure may be lost.

A multifunction instrument can have many benefits, if we combine a dissector and a scissors with the tip of the instrument for dissection and the heel for cutting. This would save time since there is no need to exchange instruments if we want to cut while we are blindly dissecting and vice versa.

The device will be cheaper than two instruments and more practical. It is even beneficial for the environment since there is only one instrument to recycle.

The best idea is to have one instrument with three or four functions. The working distal ends are frictionally engaged within the trocar, selectively advanced or retracted by the surgeon, depending upon the function needed.

Although this makes excellent sense for the surgeon, many surgical instrument companies have been reluctant to embrace this idea. The surgeon sees the practical problem but the company looks at it from a commercial point of view.

Moutaa BenMaamer, MD, FACS, Fort Myers, FL

Recognizing the individual patient

I write concerning the Statement on the Physician Acting as an Expert Witness, which appeared in the April 2011 issue of the Bulletin (Bull Am Coll Surg. 2011; 96[4]:39-40). The statement contains a phrase “the standard of care.” I believe this is an unfortunate use of a legal term in a medical professional note. I understand it is not a clinical note, but it is still information for the physician. This phrase is not used in medicine to describe the care of patients. Its use in law is confusing because there is no such thing as a standard of care. Those who do use it to describe medical care cannot define it in terms of patient care or the individualized requirements of that care.

I propose we get rid of the phrase “standard of care,” and replace it with language that describes that which we are taking about. I recognize the phrase is used to define the care a prudent physician may render under the same or similar circumstances (it does differ from jurisdiction to jurisdiction). But each patient is a unique individual with unique individualized needs. Rarely do such patients conform to those of populations that have been scientifically managed as have those individuals who have actually been in a study. I propose those patients be defined as having received “individualized appropriate care.” This phrase recognizes the individual patient seen by the physician who gives care based upon the patient’s disease, but also any other facts at play, such as the specific wants and needs of that patient. Perhaps that is not the phrase needed to describe that about which I am concerned. Let a debate begin. Let us establish our own language.

Clark Watts MD, FACS, Austin, TX

State medical liability reform

I thought that “The state of medical liability reform” article in the July 2011 issue of the Bulletin (Bull Am Coll Surg. 2011;96[7]:22-25) was comprehensive and very well-written.

Regarding [the state of] Massachusetts, it is correct that the tribunal’s findings and the expert testimony are admissible at trial. The trouble is that there is no definition of “expert.” In addition, even if the expert testimony is borderline acceptable at best, the tribunal must let the matter go to a jury trial without a bond being posted. The panel physician may, at times, dissent; I know I have done this on several occasions.

It is true that the $6,000 bond can be raised, but it can also be waived. Tribunals are routinely held much later than the rules stipulate they should be held. Part of the reason they are held so late has to do with difficulty in finding the physician panel member, given the laxness of the standards. Payment of $50 per case doesn’t help either.

Joseph R. Barrie, MD, FACS, Harvard, MA
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Motor vehicle crashes are the number one cause of death among children in the U.S. According to the Centers for Disease Control and Prevention (CDC), in 2008 approximately four children under the age of 15 were killed as a result of motor vehicle crashes, while 450 were injured each day. In that same year, restraint use saved the lives of 244 children under the age of five.

The CDC’s 2011 Child Passenger Safety Fact Sheet refers to several studies that outline the following statistics: child safety seats reduce the risk of death in car crashes by 54 percent for toddlers age one to four, and by 71 percent for infants. The use of booster seats for children ages four to seven reduces injury risk by 59 percent compared to seat belts alone.

However, restraint use among children often depends on the driver’s seat belt use. Close to 40 percent of children riding with unrestrained drivers were unrestrained themselves. Even when child restraint systems are used, they are often used incorrectly. There are specific guidelines on the CDC website that outline the stages for child passenger safety. Up to age one (or 20 pounds), it is recommended that the infant is placed in a rear-facing car seat in the back seat. Then, until age four (or 40 pounds), the child should ride in a forward-facing car seat located in the vehicle’s back seat. Up to age eight (or four feet, nine inches tall) it is recommended that children be placed in the back seat in a booster seat or until the seat belts fit the child properly. Proper fit is when the shoulder belt fits across the chest, and the lap belt lays across the upper thighs. All children under 13 years old should be placed in the back seat, and they should never be placed in the vehicle’s front seat facing an airbag.

In order to examine the impact of child car restraint devices on trauma patients less than eight years of age contained in the National Trauma Data Bank Research dataset 2009, admissions records were searched by the field for the age range of less than eight years old. These records were then divided into two groups based upon the field for protective devices (safety equipment) in use or worn by the patient at the time of injury, specifically field choice six for child passenger safety.
restraint (booster seat or child car seat). The two groups included
group 1: child restraint = yes, and
group 2: child restraint = no. In
all, 3,133 records with valid safety
device field data had discharge
status recorded, including 2,833
discharged to home, 174 to acute
care/rehab, 48 to nursing homes/
intermediate care; 78 died.

These patients were 54 percent
male, on average 4.42 years of age,
had an average length of stay of
3.80 days, and an average injury se-
verity score of 10.15. The mortality
rate for the two groups evaluated
was 1.91 percent for group 1, and
2.48 percent for group 2, which
represents a 30 percent increase in
mortality. (These data are depicted
in the figure on page 75.)

This month is national Child
Passenger Safety week (For more in-
formation, visit http://www.trafficsafetymarketing.gov/cpsweek2011/).
So, for the sake of the children,
please take a look at some of the
educational information available
and spread the word to anyone
who may have the opportunity to
have a child as a passenger. After
all, precious cargo, especially young
children, should always be placed
in the back seat.

Throughout the year, we will be
highlighting data through brief
reports that will be found monthly
in the Bulletin. The NTDB Annual
Report 2010 is available on the ACS
website as a PDF file and a Power-
Point presentation at http://www.
ntdb.org. In addition, information
is available on our website about
how to obtain NTDB data for
more detailed study. If you are in-
terested in submitting your trauma
center’s data, contact Melanie L.
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