The American College of Surgeons & The American Cancer Society:

100 years of collaboration
FEATURES

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On the cover: The American College of Surgeons and the American Cancer Society share a common organizational DNA, as evidenced by their common origins, principles, goals, and enmeshed efforts to serve cancer patients (see article, page 6).
NEWS

Dr. Hughes elected to six-year term on American Board of Surgery

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Trauma meetings calendar

ACS Clinical Research Program: Alliance leads thoracic surgery trials for lung cancer in 2012

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World Trauma Congress 2012 will take place in Rio de Janeiro, August 22–25

Register now for ACS Comprehensive General Surgery Review Course

NTDB® data points: Smarter than the average bear

Richard J. Fantus, MD, FACS
Looking forward

A first-class staff has been meeting the needs of American College of Surgeons’ (ACS) Fellows for nearly 100 years. In most ways and on multiple levels, this highly competent and dedicated workforce has evolved and expanded to meet the changing demands of the College’s membership and the surgical profession. However, some of the processes and policies that guide the staff’s activities have become outmoded and have thereby inhibited the organization’s ability to flourish.

To address this concern, late last summer the College launched the Culture-Driven Performance Improvement Project with the assistance of consultants from GE Healthcare. We anticipate that this project will take the organization’s staffing capabilities and internal operations from good to great.

The broad purposes of this activity are as follows: (1) foster a culture of continuous quality improvement that can catalyze rapid and sustainable change; (2) bind the executive leadership and the other staff with a common language and a connected purpose; and (3) integrate proven business models and processes into our everyday activities to strengthen the College’s mission and objectives. We are applying a three-stage process to achieve these goals: organization assessment, development of a performance improvement leadership team, and activation of strategic imperatives.

Phase one completed

At press time, we had completed phase one of this journey—organization assessment. This step involved taking a good, hard look at our internal structures, processes, and policies to determine what was working well, what was needed to move forward, and what was inhibiting staff performance. The entire staff was invited to participate in a series of meetings to examine how their divisions operate and interact with other areas. We conducted an organizational capability survey and our GE representatives shared best practices.

We learned a lot about our organizational capability through this process. We found that the increasing staff size and the growing complexity of the work we do have created a need for the College to develop our leadership and staff capabilities and roles. Some specific concerns uncovered include a perceived lack of career growth opportunities and a weak system for evaluating and encouraging performance improvement. We also discovered that many staff members feel disconnected from the ACS leadership and that the organizational culture varies from division to division. Furthermore, we found that the College’s increasing financial footprint and growing commercial activities have created the need to reexamine and refine basic business practices.

To address these staff-focused issues we plan to activate the following initiatives:

• Develop a first-class workforce through improved management, performance improvement, and leadership training
• Create a trusting, collaborative work environment
• Add rigor to operating and planning systems
• Institute best practices and proven business processes, such as Lean Six Sigma
• Improve communication and interactions between the ACS headquarters and the Washington, DC, Office

We have learned that some policies and processes make it difficult for you, our members, to take full advantage of ACS Fellowship. We also found that...
our lack of a central marketing plan is inhibiting our ability to reach out to all of our constituencies and communicate the relevance of ACS Fellowship. We also identified room for growth in terms of our methods of helping you and your institutions function more effectively.

In response to these shortcomings, we intend to implement the following customer-focused initiatives:

- Create an excellent member experience
- Continue to provide high-quality services and products
- Strive for commercial excellence
- Develop a broader set of accreditation programs
- Improve members’ ability to attain continuing medical education credits

**Next steps**

On February 8, the Board of Regents held a retreat to review the progress we are making with this project. During this day-long session, the Regents discussed the role that they will play and the implications for the Board’s meetings and structure. We also examined these same elements and their relationship to the Board of Governors and the Advisory Councils.

Also in February, we entered the second phase of the initiative—development of a performance improvement leadership team. The members of the executive staff were honing their skills as leaders of a high-performance organization and learning how to work together more effectively to carry out the College’s mission. We are developing a core group of experts among the general staff and inculcating them in performance improvement techniques that they can share with their colleagues and use in completing specific projects. In addition, we are providing training in change leadership to create a cultural shift toward a more nimble organization.

The third stage of the GE initiative—activation of strategic imperatives—will involve identifying our strategic imperatives and activation of a plan and framework. We will develop a set of strategic initiatives and establish metrics and targets to keep track of our progress. Then, we will create a strategic playbook, which will include tools and templates for consistency and work plans. After the strategic plan is set in motion—a process likely to take one to three years—we will begin conducting strategic reviews of our performance, identifying gaps and developing action plans for filling those cracks.

**An ongoing process**

We are all very enthusiastic about this effort to take the College from good to great by instilling a unified sense of purpose in our activities, developing more streamlined and coherent business practices, and responding to the increasingly complex needs of our members. You will be hearing more about this initiative over the course of the next year, and your input, as always, is appreciated.

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*David B. Hoyt, MD, FACS*
Common origins:
The two ACSs—

100 years of collaboration to improve the lives of cancer patients

by LaMar S. McGinnis, Jr., MD, FACS
When we talk about medical history, we often focus on the way events unfolded, but never really think deeply about why they happened. I maintain that history-making events are usually the result of persistent people with vision and ideas that respond to the problems in their environment at the time. Historic events often happen in groups of individuals who push themselves to resolve the problems of their era, and we need to cultivate these types of individuals today as we look forward to the future.

The successful collaboration between the American College of Surgeons and the American Cancer Society can be attributed to our common origins, our common evolution, and the common goals set forth by our founders and subsequent leaders. Progress is not happenstance. In our active, busy, digitally propelled lives, it is good to take a little time to look back at how we arrived where we are and to envision where we are going. A shared centennial in 2013 seems to be a proper time for organizations with shared beginnings to jointly celebrate their accomplishments.

Seneca said, “The journey is long by way of precepts, but short and effective by way of example.” This article shares the stories of some of the individuals who have led us to where we are today.

**Early efforts**

Let us set the stage. At the beginning of the last century, the medical and surgical professions, despite the presence of some considerable giants, were in a sad and undesirable situation. We were losing one-third of the U.S. population in childbirth or from disease by age five. Life expectancy was 45 years. Communicable diseases were rampant. Hospitals were to be avoided. Operations were rare and usually ended in infection, which led to death. Physicians were able to offer little but comfort and morphine, and medical education at the time was a scandal.

Four entities—the College, the American Cancer Society, the American Joint Committee on Cancer, and The Joint Commission—began with the belief that medicine and surgery needed to develop higher standards for patient care, particularly cancer care. We shared a commonality of threads of origin, which has enabled our success and survival.

In the early 1900s, cancer was viewed as a dangerous, fatal disease. It was not very prevalent because most people did not live long enough to develop cancer, and those who did usually presented at a very advanced stage and did not survive long after the diagnosis. It seemed that not much could be done for cancer patients. There was both public and professional despair and resultant indifference.

A few physicians defied these notions. One of them was J. Marion Sims, MD, a South Carolinian who practiced surgery in Alabama and then was called to New York to establish the Women’s Hospital of New York. Dr. Sims had a reputation for successfully applying surgical techniques in the treatment of fistulas in women and for performing hysterectomies and other gynecologic procedures. While at the Women’s Hospital of New York, he developed a keen interest in cancer. He knew that it was against the rules of the hospital to admit cancer patients because many health care professionals and members of the public thought cancer was contagious and incurable. He admitted cancer patients anyway. Dr. Sims has been dubbed “the father of gynecology” and was the first American physician to have a statue erected in tribute. It still stands in New York City’s Central Park.

As a result of his defiance, however, he was thrown off the hospital staff, but he had two potent allies, Elizabeth Cullum and Augusta Astor. Mrs. Astor was the wife of the tycoon, John Jacob Astor, and Mrs. Cullum was the granddaughter of the illustrious Alexander Hamilton and the widow of the General in Chief of the Union Army. Mrs. Cullum had a child with cancer, and she enlisted her cousin, Mrs. Astor, in an effort to reach out to the business community to raise money to establish the New York Cancer Hospital, which subsequently became the Memorial Hospital for Cancer and Allied Diseases in 1899. That hospital eventually became Memorial Sloan-Kettering Cancer Center, which has played such an instrumental role in the development and leadership of the American Cancer Society. These women brought cancer out of the closet, enabling a more open dialogue on the subject. Unfortunately, Mrs. Cullum’s only child died of cancer, and she subsequently died of cancer, as did Mrs. Astor.

**Thought leaders**

Several other individuals revolutionized medicine in the last century. One such individual was Abraham Flexner. Mr. Flexner was a first-generation son of immigrants from Europe. His father was a pharmacist in Louisville, KY. Mr. Flexner became an excellent and noted educator, and the Carnegie Foundation
gave him a charter to survey all of the 163 existing U.S. medical schools. At the time, many of these institutions were diploma mills, with no requirements for entering medical school, no practical training (lectures only), and no requirements for graduation other than the payment of fees. Medical education was in a terrible and vexing state.

Mr. Flexner did a remarkable job. He did visit every medical school, traveling by train, and he wrote an impactful report on medical education that has become a classic. He recommended the closing of 124 of the 163 schools extant at the time. Soon after his findings were published, many of these proprietary facilities were closed. The whole pattern of medical education was changed.

Another key figure dedicated to improving surgical education was Franklin H. Martin, MD, FACS (see photo, this page). Dr. Martin was a tall, red-headed country boy from Wisconsin who went on to practice in Chicago, IL, and became a very well-known surgeon. He established the journal *Surgery, Gynecology & Obstetrics* (now known as the *Journal of the American College of Surgeons*) as one means of educating surgeons. He established the Clinical Congress of North America as a forum where surgeons could meet and learn about surgery and watch surgeons apply excellent technique, and he was the principal person responsible for establishing and sustaining the College through its formative years. Dr. Martin altered surgical history and began our heritage.

Ernest A. Codman, MD, FACS, was perhaps the most interesting of the group (see photo, this page). He was a Boston Brahmin. Educated at Harvard University, he married the daughter of the professor of anthropology (Bowditch) at Harvard. He established an active surgical practice at the Massachusetts General Hospital (MGH) in Boston and was a leader in the use of diagnostic X ray. He was also an expert in the shoulder. Everything was going right, but Dr. Codman had strong ideas and an abrasive personality. He had the notion that if a physician was going to do something to a patient in a hospital, then it was important that the health care professional and the institution keep accurate records, document the outcome, and be very transparent with the findings. “Don’t just operate and discharge the patient; see what happens and learn from that,” Dr. Codman famously said. He also had the unusual (for the time) belief that hospitals should have some quality standards. Dr. Codman established a bone sarcoma registry,
which was the first collection of cancer data. He was an extemporaneous person. He was brilliant. His ideas were different and challenging, and he managed to offend nearly every group with which he worked. Dr. Codman stated that it might be 100 years before his ideas would be accepted. He was a true visionary.

W. Hardy Hendren III, MD, FACS, recently sent me a restoration of the original cartoon that Dr. Codman drew (see Figure 1, this page). He was lampooning the medical profession in Boston. In the comic he depicted his belief that as long as the Back Bay Peacock was laying golden eggs, the medical establishment there saw no need to collect and examine data. With that presentation to the Suffolk Massachusetts District Surgical Society, he was removed from the society and from the staff at the MGH. He then established his own hospital (the End Result Hospital) and continued to collect and publish data on each and every patient. He was outspoken, thus offending his peers. As a result, he received no referrals and the hospital failed.

Dr. Codman’s accomplishments were many; he established the first morbidity and mortality conference, at MGH; with his Harvard classmate, he developed what they called “the ether record” and what is today referred to as the anesthesia record; he published books on the shoulder and on bone sarcoma; he established the “end-result” idea; he is now known as the father of outcome studies and evidence based medicine; he believed in transparency of data; he was appointed the first Chair of the Standards Committee of our burgeoning College and was responsible for developing the Minimum Standard for Hospitals, issued in 1917, focusing on medical staff organization, on critical evaluation of clinical practice, and on medical record standards. Following the publication of the Minimum Standard, hospitals were surveyed relative to the Standard, by the College. The results, reported at a meeting at the Waldorf Astoria hotel, revealed that only 89 of 692 hospitals met the standard. Following the meeting, the results of the report were burned and never released.

With all of his many contributions, many are just coming into acceptance today (as he predicted). Dr. Codman died in 1940 of melanoma, was a virtual pauper, and chose to be buried in an unmarked grave in the famous Mt. Auburn Cemetery (Cambridge) so as to not impose the expense of a headstone upon his widow. I believe that The Joint Commission, the American Cancer Society, the American College of Surgeons, and the American Academy of Orthopaedic Surgeons should erect a headstone at the grave site to properly acknowledge
this visionary and our debt to him. Our centennial year would be the perfect time for this to occur.

William Halsted, MD, FACS, who was the first chair of surgery at Johns Hopkins University, Baltimore, MD, revolutionized surgery in this country (see photo, page 8). His accomplishments were many, and I will enumerate only a few of them in this article. He requested that the Goodyear Company make the first pair of rubber surgical gloves for his nurse and future wife—Carolyn Hampton, niece of the South Carolina Gen. Wade Hampton—because she was allergic to carbolic acid. He encouraged the use of fine sutures and ligatures and advocated treating tissues with respect, with an emphasis on gentle handling. Dr. Halsted developed thyroid surgery. He evolved local, regional, and spinal anesthesia. He created the surgical training program that became the model for virtually all surgical resident training programs in the last century. He introduced radical mastectomy. Dr. Halsted has since been castigated for the latter, but we should acknowledge that at that time, hardly anyone survived breast cancer, and that the Halsted mastectomy resulted in a 40 to 45 percent five-year survival rate. He revolutionized surgical practice and training and established a paradigm regarding the way in which cancer spread, which survived over the last century.

Thomas Cullen, MD, FACS, and Clement Cleveland, MD, FACS, together were the founders of the American Society for the Control of Cancer (ASCC) in 1913, which subsequently became the American Cancer Society. They were general surgeons with a focus on gynecologic surgery. Dr. Cullen analyzed his cases of cervical cancer and reported his findings to the American Gynecological Society in 1912, noting that at five years, only 23 percent of his patients were surviving. Around that same time, the Prudential Insurance Company had noted a marked increase in the incidence of cancer. Cancer was becoming a very prominent clinical problem. Dr. Cullen, practicing in Baltimore, MD, was appointed head of a committee of the evolving American College of Surgeons, to collect and to promulgate data regarding cancer. Joining forces with Dr. Cleveland in New York, NY, these two men put together a group of physicians and laypeople with the purpose of collecting data about cancer and educating the public about the condition. As a result of their activities and the group they brought together, the ASCC was established to continue those efforts.

Their patient education efforts led to the publication of an article in the May 1913 issue of the Ladies Home Journal, titled “What can we do about cancer?” This article—which was also noted in Collier’s and McClure’s magazines—is believed to have been read by 11 million people, revolutionizing the public’s understanding of the disease and educating people that with early detection, cancer was treatable—although treatment options were limited at the time. The concept of fight-

Timeline:
The evolution of collaboration

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>1913</td>
<td>The American Society for the Control of Cancer</td>
</tr>
<tr>
<td>1913</td>
<td>The Cancer Campaign Committee</td>
</tr>
<tr>
<td>1921</td>
<td>Registry for Bone Sarcoma</td>
</tr>
<tr>
<td>1922</td>
<td>The American College of Surgeons Committee for the Treatment of Malignant Disease by Xray and Radium</td>
</tr>
<tr>
<td>1927</td>
<td>Program for Survey and Approval of Cancer Facilities</td>
</tr>
<tr>
<td>1930</td>
<td>The American College of Surgeons Committee on the Treatment of Malignant Disease</td>
</tr>
<tr>
<td>1931</td>
<td>Organization for a Service for Diagnosis and Treatment of Cancer</td>
</tr>
<tr>
<td>1939</td>
<td>The American College of Surgeons Committee on Cancer</td>
</tr>
<tr>
<td>1970</td>
<td>The American College of Surgeons Commission on Cancer</td>
</tr>
</tbody>
</table>
ing cancer by educating the public had begun. John Bowman, PhD, was the first director of the College at that time (1915 to 1921) and began establishing hospital standards for the cancer program.

Dr. Cullen became a leader in cancer care through his work with Joseph Bloodgood, MD, a pathologist at Johns Hopkins Hospital. Together, they established the frozen section as a diagnostic tool for cancer. They also created and publicized a list of the “danger signals of cancer,” which was translated into 22 different languages; more than 700,000 requests for these signals were received. When they started this activity in 1910, the average delay in diagnosis of cancer was one year from the onset of symptoms. By 1923, it had fallen to four months, so the impact was significant.

Evolution of collaboration

On page 10 there is a timeline depicting the evolution of collaborative efforts between the American College of Surgeons and the American Cancer Society. It is interesting to note that in 1913 the Prudential Insurance Company published a bulletin called “The Menace of Cancer,” which showed a rapid increase in the incidence of cancer (from tenth to fourth). In that same year, the College and the ASCC were established. The epidemiologic influence on cancer began to occur. In 1923, epidemiologist George Soper, MD, managing director of the ASCC, began to criticize the organization’s Cancer Campaign Committee for being too optimistic about cancer, and he asked, “Should we motivate the public by optimism or by fear?” This is an interesting question, even today. In 1914, this committee established a New York office with a budget of $5,000. In 1923, it was legally incorporated.

Meanwhile, Dr. Codman’s registry for sarcoma had been established and led to the formation of other cancer registries and to the collection of appropriate data. In 1922, the College formed the Committee on the Treatment of Malignant Disease by X-ray and Radium, which subsequently became the Committee on Cancer. The first chair, Robert Greenough, MD, FACS, of Boston (see photo, page 8), established the first consultative U.S. tumor clinic at the MGH. He emphasized the need for microscopic confirmation of the diagnosis of cancer, and called for the collection of five-year survival rates. Dr. Greenough subsequently became President of the American College of Surgeons in 1934 and was president of the ASCC in 1937, the year of his death.

Table 1

The Committee on Cancer of the American College of Surgeons

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>1952</td>
<td>Cancer Committee membership expanded to American Cancer Society, National Cancer Institute, American College of Radiology, American College of Physicians, and College of American Pathologists</td>
</tr>
<tr>
<td>1953</td>
<td>Cancer Registry approved by the county medical society</td>
</tr>
<tr>
<td>1954</td>
<td>Terminated approval of cancer detection centers</td>
</tr>
<tr>
<td>1947–1953</td>
<td>Regionalization concept—cancer detection centers</td>
</tr>
<tr>
<td>1950</td>
<td>Cancer Is Curable brochure</td>
</tr>
<tr>
<td>1960</td>
<td>Field Liaison Program</td>
</tr>
<tr>
<td>1960–1973</td>
<td>Emphasis on quality of care</td>
</tr>
<tr>
<td>1965</td>
<td>The Commission on Cancer</td>
</tr>
<tr>
<td>1966</td>
<td>Cancer Program Manual</td>
</tr>
<tr>
<td>1983</td>
<td>Cancer Management Course</td>
</tr>
<tr>
<td>1990</td>
<td>National Cancer Data Base</td>
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</tbody>
</table>

The ASCC’s Committee on Cancer precipitated the 1927 formation of the Program for Survey and Approval of Cancer Facilities. The ASCC (later known as the American Cancer Society) funded that activity, and it should be noted that from 1926 to 2005, the Society spent $26 million dollars to fund this program.

Bowman Crowell, MD, a pathologist from Nova Scotia, was an important figure in these early efforts, as he took over the bone sarcoma registry in 1926 (see photo, page 8). He began to further emphasize the wider collection of data so that the cancer facilities that the Cancer Society had urged to be formed could be evaluated properly. By 1930, there were 198 approved cancer centers in the country; and by
1943, 380 cancer clinics had been approved by the College, with 80,000 patients a year being seen in those facilities. Dr. Crowell was very influential. As Co-Director of the College, he led the organization’s quality improvement efforts and accomplished much for the College. He gave an address at the 25th anniversary of the American Society for the Control of Cancer, and in 1949, he became the first person to receive the Medal of Honor from the American Cancer Society. It should be noted that in addition to the Medal of Honor, Dr. Crowell was given a cigarette lighter!

In 1930, Dr. Greenough was appointed to chair the College’s Committee on the Treatment of Malignant Disease, which would become the Committee on Cancer. Again, the American Cancer Society—which was still the ASCC at the time—gave a grant to the College to develop standards for surveying oncology centers. This step marked the beginning of the Hospital Cancer Approvals Program. In 1931, a service for the diagnosis and treatment of cancer (cancer clinics) was again led by Dr. Crowell. That same year, there was a joint meeting of the boards of the American Cancer Society and the College to study and to further develop this issue. By 1935, 25,000 patients were listed in the cancer database with information indicating who had died or survived, and 2,800 patients were in the bone sarcoma registry.

In 1936, a significant act of the ASCC, now led by Clarence Little, MD, was the formation of the Women’s Field Army, which became the primary fund-raising unit and the service unit for this burgeoning organization. It should be noted that Dr. Cullen was the first to recognize the importance of women in the battle against cancer. As he noted, “They direct the family in health care,” a fact that persists to the present.

I have recognized the importance of women in the American Cancer Society, and devoted my year as president (1995) to not only the women in the American Cancer Society but to cancer in women. At that time, there had been only one female chairman of the board, no society president, and few leadership positions for both female volunteers and staff. Since then, considerable improvement has occurred for women, with the appointment of six national board chairs, three presidents, and multiple senior staff officers.

With vigorous support from both the American Cancer Society and from the College, in 1937, the National Cancer Institute Act was passed, and the National Cancer Institute was formed. Progress has occurred but, admittedly, at a slower than desired pace.

In 1939, the College created its Committee on Cancer, with Frank E. Adair, MD, FACS, as Chair (see Table 1, page 11). Dr. Adair was a prominent surgeon at Memorial Sloan-Kettering and was president of the American Cancer Society in 1945. In 1953, the Cancer Society and the College came together to form cancer detection centers, with the Cancer Society providing funding for the College’s efforts to survey these cancer detection centers. However, that collaboration only lasted two years because it was so difficult to establish and evaluate standards. In 1952, the committee became multidisciplinary (American College of Surgeons, National Cancer Institute, American College of Radiology, American College of Physicians, and the College of American Pathologists), and in 1970, the College’s Committee on Cancer became the Commission on Cancer under the direction of R. Lee Clark, MD, FACS, who was also the founder of the MD Anderson Cancer Center in Houston, TX. There has been a continuing expansion of multidisciplinary members on the Commission.
Continuing evolution

Dr. Little was the managing director of the ASCC, beginning in 1929, and he focused on professional and lay education and the regionalization of the organization. He formed the Women’s Field Army mentioned previously. He encouraged the society to support the National Cancer Institute (NCI) Act of 1937 and led the reorganization of the Cancer Society in 1941.

Mary Lasker is generally recognized as the person who made the modern American Cancer Society what it is today. She was the wife of a prominent advertising executive in New York City; she had connections. She became very interested in cancer because one of her household staff had the disease, and she was amazed at how poor the care was. Under her direction, the Cancer Society’s fundraising capabilities were remodeled and she raised $4 million in the first year—which totally revolutionized what was happening in the organization. There was some regionalization at the time, and the 60 percent (division)/40 percent (national) split of funds began. She insisted that the organization be led by 50 percent laypeople and 50 percent health care professionals, and that arrangement has persisted. She insisted that 25 percent of the funds raised be directed toward research efforts. Isn’t it interesting that that expectation continues to be in place? Also, she insisted that the name be changed from the ASCC to The American Cancer Society. Ms. Lasker was a strong and highly principled person, and her influence continues today.

Elsie Mead became Chair of the ASCC, following Dr. Clement Cleveland (her father). She was a fundraiser par excellence, and she is the individual who involved the American Federation of Women’s Clubs with the organization. Ms. Lasker and Ms. Mead laid the strong foundation that has enabled the American Cancer Society to become the largest, best-recognized volunteer health organization in the world today.

Post-World War II, the Mary Lasker influence took hold; Lane Adams was the chief executive officer of the Cancer Society at that time. He moved the organization forward, increased visibility, increased prominence, increased patient services, and increased the local presence.

During this era, the College worked to establish what we now know as The Joint Commission because the College could no longer afford to sustain its hospital standards inspection program. The College had spent $2 million on this effort, so a group composed of representatives from the College, the American Medical Association, the American Hospital Association, the American College of Pathologists, and the Canadian Medical Association was brought together to form the Joint Commission on Accreditation of Healthcare Organizations. Today, The Joint Commission accredits approximately 20,000 national organizations and 450 international institutions. The Joint Commission’s accreditation is the gold standard.

The Directors of the Commission on Cancer (CoC) are listed in the Table 2 on page 12. I became active with the CoC when Andy Mayer, MD, FACS, a Vanderbilt University (Nashville, TN) surgeon, was Director of the Commission. It was interesting at the time; not only did Dr. Mayer smoke cigarettes, but every member of his staff smoked. The first meeting I attended was in Richmond, VA. I checked into the hotel and received a message to join the group for dinner. I joined the group at this big round table; everyone was smoking. The smoking went on throughout Dr. Mayer’s entire tenure as director. Further, he stated that he would never have a computer in the CoC. Then Charlie Smart, MD, FACS, came on as Director. He was from Utah, a Mormon—there was no tobacco to be found, and he was very computer-oriented.

Needless to say, things evolve. David P. Winchester, MD, FACS (see photo, page 8), took over as director in 1984, and continuing progress has occurred. The CoC has been responsible for the modern Hospital...
Cancer Approvals Program, with nearly 1,500 approved programs, where 70 percent of U.S. cancers are treated; the Cancer Liaison Program; the National Cancer Data Base (NCDB) (with 26 million patients, making it the largest in the world); hospital tumor registries; cancer management courses; the annual CoC Oncology Lecture at the College’s yearly Clinical Congress; the National Accreditation Program for Breast Centers (NAPBC); the Cancer Program Manual; the Cancer Quality Improvement Program; and so on. Many of these programs have been funded and developed in collaboration with the American Cancer Society. It has been impossible in the allotted space to properly note the strong leadership provided over time by many volunteer surgeons serving in a variety of roles.

The evolution of the many important efforts that have been carried out through what we now know as the American Joint Committee on Cancer (AJCC) is outlined in Table 3 on page 12. The AJCC was first formed in 1950 as the Joint Committee on Reporting Cancer End-Results. Dr. Lee Clark and Murray Copeland, MD, FACS (see photo, page 8), were the most important figures in the development of the AJCC. Dr. Copeland, at that time, was the chair of the department of surgery at Georgetown University in Washington, DC, and he headed the Committee on Clinical Stage Classification and Applied Statistics of the International Union Against Cancer, which subsequently became, in 1958, the American Joint Committee for Cancer Staging and End Result Reporting, and in 1980, the AJCC. The AJCC has been essential to progress in the staging of cancer, which is the basis for cancer therapy. The TNM classification of malignant tumors staging system and the Cancer Staging Manual, now in its seventh edition, are only two of the important contributions of the AJCC—another product of the collaboration between our College and the American Cancer Society.

Five surgeons have been privileged to be President of both the American College of Surgeons and American Cancer Society. Looking at Table 4 on page 13, it is interesting to note the timing between when a surgeon was President of one and then the other organization. It is further evidence of the integration that has occurred over time.

**Tree of Life**

The Tree of Life depicted in Figure 2 on this page shows the essence of the integration and evolution of all that has gone on. It shows how the American College of Surgeons and the American Cancer Society, through their various synergies, formed the Commit-
tee on Cancer, the Committee on Standards—which led to the Joint Commission on Accreditation of Hospitals, now The Joint Commission; the Commission on Cancer; the NCDB; the AJCC; the National Tumor Registrars Association (NTRA); and all of the different products and committees that are involved in the organizations’ efforts to improve care for cancer patients. My question now is: What follows? Where are we going? New outcomes measurement programs are being instituted, including the NCDB’s Rapid Quality Reporting System. An effort is under way to combine and analyze data from the College’s National Surgical Quality Improvement Program (ACS NSQIP®) and the NCDB. In addition, the College is working with the Centers for Medicare & Medicaid Services to use the ACS NSQIP as the basis for evaluating surgical quality improvement.

In addition, NTRA—now the National Cancer Registrars Association—was formed, and is continually striving to increase quality and efficiency in data collection and to maintain the pool of trained registrars. The understanding and management of cancer is changing rapidly and substantially and all cancer professionals must remain current and collaborative. We have many opportunities to grow and come together.

As we move forward, I would assert that collaboration works and that protective silos stymie progress, that significant impact is usually the result of persistent visionaries working in the right environment, and, finally, that a focus on improving health care is the only reality for health care professionals.

Today, cancer is the second leading cause of death in the U.S. and the leading cause of death among the non-communicable diseases worldwide. It takes us too long to achieve improvements and to creatively change, thus it ever-more essential for us to continue to be visionary, collaborative, and effectively productive. As Margaret Mead said, “We are continually faced with great opportunities which are brilliantly disguised as unsolvable problems.”

**Editor’s note:** This article is an adaptation of a presentation given to a joint meeting of the American Cancer Society, the American College of Surgeons, and the American Joint Committee on Cancer, in Atlanta, GA, October 3–4, 2011.

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Darke County, OH, is a rural area situated on the Ohio/Indiana border. It is the birthplace of famed sharp-shooter Phoebe Ann Moses, better known as Annie Oakley, who became legendary for her ability to support her family by hunting and selling game that showed few signs of gunshot damage due to her precise aim.1

Cancer care closer to home: Dr. McKellar ensures rural patients get quality care

Today, Daniel P. McKellar, MD, FACS, and the other health care professionals at the Wayne HealthCare Cancer Program have developed a reputation in this rural county as sharp-shooters of a different kind. They are known for precisely targeting and eradicating cancer through the delivery of consistently high-quality care.

“There was such a tremendous need for quality cancer care treatment in this area,” said Dr. McKellar, Chair-Elect of the American College of Surgeons’ (ACS) Commission on Cancer (CoC). “Before we started offering chemotherapy at our facility, patients often had to travel 70 miles round-trip to Dayton and back for their chemotherapy. For patients receiving radiation they travel that distance each day for six weeks,” added Dr. McKellar, who anticipates the new radiation center will open sometime this year.
Building from the ground up

Wayne HealthCare, which operates the cancer program, sprang from the humblest of roots. It was founded as Greenville Hospital in 1922, coincidentally the same year as the ACS established what is now known as the CoC. In 1941, the facility’s name was changed to Wayne Hospital, and the bed capacity increased to 50. The institution grew incrementally over subsequent years, steadily increasing in capacity and adding a nursing unit in 1971 and a rehabilitation center in 1999.

In 2010, a $47 million construction/renovation program was completed and the facility was renamed Wayne HealthCare. As part of this expansion, the Wayne HealthCare Cancer Program was able to enhance its diagnostic and treatment capabilities.

Dr. McKellar noted two significant milestones in particular: the launch of the facility’s infusion center (after meeting nursing training standards and pharmacy requirements), enabling the center to provide chemotherapy to patients who previously would have had to travel to Dayton for such treatment; and a partnership with Dayton Physicians and Premier Health Partners to develop a radiation therapy facility located in Darke County.

The cancer program received a three-year accreditation from the CoC that same year, with commendations in all eight available areas, and was one of a select number of hospitals in the U.S. to receive the CoC’s Outstanding Achievement Award (see boxed item, page 25, for a list of these eight standards). Dr. McKellar, the cancer program’s medical director, said he was proud of the facility’s accomplishments, particularly in light of the challenges associated with building such a program from the ground up in a non-urban environment.

One other important milestone for this CoC-accredited facility is a service that goes beyond the current mandated standards and requirements—the opportunity for patients to participate in clinical trials, including state-of-the-art treatment trials, cancer control trials, and cancer prevention trials. In fact, last year, the facility enrolled 6 percent of its patients in national clinical trials.

“Our goal was not only to meet the standards but to exceed them,” explained Dr. McKellar. “By joining with the Dayton Clinical Oncology Program (DCOP), we are able to offer cancer patients national clinical trials through a grant from the National Cancer Institute.”

DCOP is a not-for-profit consortium of Ohio and Indiana hospitals that provide cancer patients with opportunities to participate in national clinical trials. Participating institutions involved in these clinical trials have, according to Dr. McKellar, led to valuable improvements in how cancer patients are treated.

“Patients with cancer want to receive the best possible therapy for their disease,” said Jill Brown, RN, BSN, Wayne HealthCare cancer care coordinator, in a press release announcing the initiative. “In most cases, this does not mean they have to travel to large academic medical centers. Community-based research offers patients access to national clinical trials offering new treatments without leaving home.”

Returning to his roots

Throughout his career, Dr. McKellar’s primary goal has been to improve the quality of care for cancer patients. He is a board-certified surgeon with extensive experience in caring for patients with breast and colon cancer, as well as melanoma and other skin cancers. He attended Loyola University’s Stritch School of Medicine in Chicago, IL, where he received the President’s Medallion—the highest honor for a graduating student. He performed his surgical residency at Wright State University, Dayton, OH, which was followed by four years of service in the U.S. Air Force. After being in private practice for several years, he joined the staff at Wayne HealthCare as a full-time general surgeon and director of the cancer program in 2009. Previously, Dr. McKellar had been treating cancer patients in Darke County on a part-time basis, but two considerations compelled him to join the staff full-time: the caliber of physicians, nurses, and other medical professionals at Wayne HealthCare; and the opportunity to serve the rural community.

“I had been practicing for many years in Dayton, in an urban area,” explained Dr. McKellar. “I was a director of a large cancer program there. At the time, Wayne was in the process of losing one of its surgeons, and since I had a large referral base in the area, I agreed to help out a day or two a week. I eventually joined the staff full-time. I enjoy seeing these patients, who are largely from the farming community and also the elderly. I grew up in a rural area.”

Developing a rural cancer center

Wayne HealthCare administrators approached Dr. McKellar about developing a cancer program (the first such program in Darke County) because
The Wayne HealthCare program received a commendation from the Commission in all eight of these standards in 2010. Since then, the standards have been revised and were released this year. The Commendation rating (1+) is valid for eight (22 percent) of the standards, as follows:

**Standard 2.11**
Each year, the cancer committee or other appropriate leadership body analyzes patient outcomes and disseminates the results of the analysis.

**Standard 3.3**
For each year between surveys, 90 percent of cases are abstracted within six months of the date of first contact.

**Standard 3.7**
Annually, cases submitted to the National Cancer Data Base (NCDB) that were diagnosed in 2003 or more recently meet the established quality criteria and resubmission deadline specified in the annual Call for Data.

**Standard 4.6**
The guidelines for patient management and treatment currently required by the CoC are followed.

**Standard 5.2**
As appropriate to category, the required percentage of cases is accrued to cancer-related clinical trials on an annual basis.

**Standard 6.2**
Each year, two prevention or early detection programs are provided on-site or are coordinated with other facilities or local agencies.

**Standard 7.2**
Other than cancer conferences, all members of the cancer registry staff participate in a local, state, regional, or national cancer-related educational activity each year.

**Standard 8.2**
Annually, the cancer committee, or other appropriate leadership body, implements two improvements that directly affect cancer patient care. The improvements are documented.

Cancer program standards 2012

As Chair of the CoC Accreditation Committee, Dr. McKellar had assisted in the extensive revision of the CoC’s standards for cancer programs, and in August 2011, the Commission released the new standards titled Cancer Program Standards 2012: Ensuring Patient-Centered Care. This manual replaces the Cancer Program Standards 2009: Revised Edition, and according to Dr. McKellar, the new standards focus on patient-centered needs, quality of care, and outcomes. New standards are available at http://www.facs.org/cancer/coc/cocprogramstandards2012.pdf.

“Our previous [set of] standards, which mainly focused on diagnosis and treatment, had some gaps in it,” admitted Dr. McKellar. “The new standards address the full continuum of care. The standards still address diagnosis and treatment, but now the focus has been expanded to cover areas such as survivorship, psychological distress, patient navigation, palliative care, and genetics services.”

Of particular note is a new standard that requires CoC programs to reach specific performance levels on measuring quality for treating patients with breast, colon, and rectal cancers. The CoC, through its National Cancer Data Base (NCDB), has the only system available in the U.S. to apply these quality measures and feed data back to its programs to evaluate how they are performing. This system, in turn, allows them to develop a cancer care program that renders care along a continuum of continuous quality improvement.

“The National Cancer Data Base Rapid Quality Reporting System gives real-time feedback to health care providers,” added Dr. McKellar. “It acts as a reminder system—if your patient had this particular diagnosis, then he or she should have received this particular care. It’s fantastic and a real improvement in quality of cancer care and assuring that patients receive all components of their care and don’t fall through the cracks.”

Five elements that are integral to the success of a CoC-accredited cancer program, regardless of whether it is a small, rural or a large, urban cancer program, are as follows:

• The clinical services provide state-of-the-art pre-treatment evaluation, staging, treatment, and clinical follow-up for cancer patients seen at the facility for primary, secondary, tertiary, or quaternary care.
• A multidisciplinary cancer committee leads the program through setting goals, monitoring activity, evaluating patient outcomes, and improving care.
• The cancer conferences provide a forum for multidisciplinary patient consultation and contribute to physician education.
• The quality improvement program is the mechanism for evaluating and improving patient outcomes.
• The cancer registry and database is the basis for reporting and monitoring the quality of care.3

Chair-Elect of the CoC

As one of the first rural surgeons to be elected Chair-Elect of the CoC, Dr. McKellar intends to draw, at least partially, on his experiences in developing the cancer program at Wayne HealthCare to help the Commission—and its more than 1,500 accredited cancer programs in the U.S.—continue to define and exemplify modern oncology care.

“It’s a tremendous opportunity for me to be practicing in a rural center and be elected chair of the Commission,” said Dr. McKellar, who assumes the role of Chair in October. “More than 70 percent of the COC-accredited cancer programs are community programs. I think sometimes health care professionals may have the wrong idea that the Commission focuses more on larger programs—but that’s not really true. We know that cancer patients want to be treated close to home but [also] want the assurance that they will receive high-quality care. One of my goals will be to determine how we can improve quality of care specifically at these community cancer programs—and we’ve started on that goal by developing these new standards.”

As a rural, community-based surgeon, Dr. McKellar says that his patients will continue to inspire him to grow and improve Wayne HealthCare and the CoC. “They keep me going. I see what they are going through, what their needs are, and how they deal with their situations and that is what really inspires me. They want to receive quality care right here, close to home, and we want to continue to make that possible.”

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Mr. Peregrin is Senior Editor, Bulletin of the American College of Surgeons, Chicago, IL.
Surgeons experience more ergonomic stress in the OR

by Jeannie Glickson
Ramon Berguer, MD, FACS, chief of surgery at Contra Costa Regional Medical Center in Martinez, CA, near San Francisco, recalls that during his residency in the late 1980s at the University of Colorado Hospital, Denver, laparoscopic surgical procedures were coming of age. “Gynecologic surgeons were the first to popularize laparoscopic surgery,” Dr. Berguer said, “and these minimally invasive procedures were quickly transforming the way surgeons did their jobs.”

As Dr. Berguer performed increasingly complex laparoscopic procedures, he noticed that his shoulders, arms, neck, back, and wrists ached after he left the operating room (OR). He also began to notice a host of other work issues in the laparoscopic OR, with its “incredible tangle of wires and cables”—and a potential minefield of physical injury to health care staff and medical errors.

Dr. Berguer now refers to matters involving the laparoscopic surgeon and the equipment, systems, and processes in the OR as the physical and psychological interaction between the users and their tools—in a word, ergonomics. “Surgeons depend on tools to conduct their trade,” Dr. Berguer said. Stressing the importance of ergonomic issues, he added, “How we work with these tools affects not only the length of the procedure and the overall morbidity of our patients, but also how comfortably we can use our limbs and muscles when we leave the OR.”

Adrian Park, MD, FACS, chairman of the department of surgery at Anne Arundel Medical Center in Annapolis, MD, and adjunct professor of computer science at the University of Maryland, Baltimore, speaks of a similar introduction to ergonomics.

“I was one of the guys on the ground floor of minimally invasive surgery (MIS),” Dr. Park said. “I was young and physically active and all gung-ho on MIS, even though I was trained [in] performing open operations.”

Dr. Park quickly realized the “pervasive toll” of MIS. “Even as a young guy,” he said. “I thought to myself that I couldn’t keep this up for the length of a career.”

“Surgeons are not ones to hold back on their complaints,” Dr. Park added, “but when it comes to our own health, we are slow to act. We turn our bodies into pretzels for the best outcome for the patient, and this strenuous activity is just not sustainable. Laparoscopic procedures are beneficial for patients, and clearly, the technique is here to stay,” Dr. Park said, “but surgeons need to look out for their own well-being as well.”

An ergonomic crisis

Surgeons are facing an ergonomic crisis, according to Peter F. Nichol, MD, PhD, FACS, assistant professor, section chief of pediatrics, department of surgery, University of Wisconsin School of Medicine and Public Health, Madison. “Ergonomics may be the most important issue facing surgeons today,” he said, adding that problems occur during both laparoscopic and open procedures.

The current crisis, Dr. Nichol said, is a product of surgeons’ increased workload. “There are 330 million people in the U.S. [compared with about 263 million in 1995] and the same number of surgeons [as in 1995],” he said. “Surgeons are working harder and paying a higher physical price.”

This undersupply of surgeons adds to the stress of the OR environment and may have a negative effect on quality of care. “It’s an industrial truth that the more stress you put on human beings, the more mistakes they make,” Dr. Nichol said. Medical devices are vital to the surgical procedure, but many do not adhere to basic ergonomics, he said, pointing to the one-size-fits-all oversight inherent in many of today’s surgical instruments.

“Industry hasn’t been paying attention,” according to Dr. Nichol. “I’m hearing from a lot of angry surgeons out there who want things to change.” He noted that there are consequences when the medical industry fails to respond to ergonomic issues: The U.S. Food and Drug Administration estimates that the poor design of medical instruments accounts for half of the 1.3 million unintentional patient injuries in U.S. hospitals each year.2,3
Surgeons can look to external forces to ease the strains of their jobs, but it’s important for them to re-evaluate their own habits as well, according to Dr. Nichol. “The work of surgeons is incredibly hard on the human body,” he said, and surgeons need to be in the best possible physical condition. “We need to find ways to keep our bodies durable over the course of a 30-year career,” he said. “I like to say that we need to train like ultra-marathoners.”

Because surgeons are often on their feet and moving around for 12-hour periods, the overall stress and strain on their bodies is enormous. “We should be weightlifting two or three times a week and doing aerobic exercise twice a week for 30 to 40 minutes, to be in shape for the challenge. And we should be eating foods that will enable us to get through the day,” Dr. Nichol said. “Our bodies have been abused and neglected,” Dr. Nichol continued. “Many of us are sleep-deprived. My point is that we have to change the way we look at ourselves and change our behavior.”

Ergonomics should be taught during surgical training, according to Dr. Berguer. “Surgeons generally learn their craft in an environment that discourages complaints about stress and fatigue,” he said. “Medical schools do not teach surgeons to take breaks,” Dr. Berguer added. “We are trained to work until we finish the job. But I’ve found that every 30 or 40 minutes, it helps to take my eyes off the operation and take a 30-second break.”

As Thomas Krummel, MD, FACS, lightheartedly observed, “Most surgeons are ‘suck-it-up’ guys and gals. We tend not to complain about our own physical discomfort. We put the needs of our patients first.” Dr. Krummel is Emile Holman Professor and Chairman, department of surgery, Stanford University School of Medicine (SUSM) in Palo Alto, CA; Susan B. Ford Surgeon-In-Chief, Lucile Packard Children’s Hospital; and co-director, Biodesign Program at Stanford University. But sentiments may be shifting. Dr. Krummel, Dr. Nichol, and Dr. Park were among several speakers at a 2011 American College of Surgeons Clinical Congress panel session titled “Surgeon Wear and Tear: The Hidden Cost of Adverse Ergonomics.”

“I was stunned by the number of people who attended the session,” Dr. Krummel said. “I don’t consider myself an ergonomic expert. I’m just a surgeon in the trenches. But the fact that people stayed long after the program to continue the discussion says to me that we are all experts to some degree, and the discussion needs to continue.”

Understanding the surgical workplace

It is especially important to continue the discussion as MIS becomes the norm for many operations. “With MIS, you’re holding instruments in weird, unsupported positions, and today, 20 years after we began using these procedures, we’re seeing the wear and tear they have on surgeons,” according to Sherry Wren, MD, FACS, associate dean, academic affairs; professor of surgery, SUSM, and chief, general surgery, Palo Alto Veterans Health Care System. Laparoscopic practice left Dr. Wren in need of surgical repair of her rotator cuff, which sidelined her from the OR for more than three months and involved more than a year of physical therapy. To offset the often-debilitating effects of MIS, she depends more today on robot-assisted surgery. “There are drawbacks to using robots, but it’s a lot easier on me to sit in a console and let a robot do all the twisting and bending.” The long-term benefits of robot-assisted surgery, Dr. Berguer noted, will depend on the balance between ergonomic improvements and the cost of the systems.

The setup in a standard OR is not always optimal for performing laparoscopic procedures, Dr. Berguer said. Indeed, most minimally invasive surgical procedures take place in ORs that were designed for traditional open surgery.4

Walk into a laparoscopic OR, and you are likely to find a maze of tubes and cables that cross the workspace, and create obstructions and hazards to personnel and equipment. Laparoscopic operations have tripled the number of cables and tubes that touch the surgeon or assistant. These cables are both a hindrance to movement and a potential source of breaks in aseptic technique. The multiple tubes also create an elaborate background that can decrease the efficient use of instrument handling, positioning, and exchanges.5

The Occupational Safety & Health Administration (OSHA) of the U.S. Department of Labor has pointed out that the wires pose a tripping hazard, and it is not uncommon for health care workers to attach the wrong device to the wrong cable.6 Among OSHA suggestions: ORs could provide ceiling or floor outlets for equipment to ensure that power cords do not run across pathways. Also, practitioners could make mobile equipment more visible by marking it with a bright color or a taped “X.”6

In addition, researchers found that the percentage of total floor space occupied by humans, furniture,
and equipment during laparoscopic operations increases by 10 percent over open operations.5

**Ergonomic impact of laparoscopy**

A number of issues—including the awkward positions endured by surgeons and the placement of the operating table and monitor—add to the stress of the OR. The long laparoscopic instruments and the resulting pain and stiffness that surgeons experience after operations add to the physical and psychological toll.7

Traditional laparoscopy forces the fulcrum effect on surgeons, requiring them to move their hands in the opposite direction of the instrument’s tip. The surgeon’s hand moves left, and the instrument tip moves right.8 Laparoscopic surgery changes the way that surgeons interact with the surgical field, Dr. Berguer explained, noting first the impact that MIS has on the surgeon’s posture. The hand-held instrument design, the position of the monitor, the use of foot pedals to control diathermy, the height of the operating table, and the static body posture all affect the practitioner’s posture in the OR, he said.

The fixed-position entry ports limit the ability to adjust instrument position and angles, Dr. Berguer said. Handheld laparoscopic instruments offer only four degrees of freedom, a factor that, when combined with the fixed entry positions, limits the surgeon’s ability to position instruments optimally. Laparoscopic surgeons, therefore, lack the freedom to move around during a procedure and, as a result, tend to shift their weight and flex their necks, which leads to more muscle strain and soreness.

“In open surgery,” Dr. Berguer said, “we look and touch patients’ tissue directly using our hands or simple tools.” Dr. Park explained, “In open surgery, your fingers and wrists directly interact with the target anatomy.” The long laparoscopic instruments that reach inside the closed abdomen are more awkward and difficult to use than open instruments. “With laparoscopic instruments, the surgeon is essentially using a chopstick,” Dr. Park continued. “The result is that our senses must work much harder to achieve the same goals.”

During laparoscopic procedures, surgeons no longer look directly at the operating site, as they would during an open operation, but rather at a display. The surgeon must separate the visual and the physical, blending the view on the display and the mechanical feedback from the arms and hands to manipulate the tissue.9 Under these conditions, Dr. Park said, it takes surgeons more time and physical and mental effort to complete manipulative tasks.

Laparoscopic surgeons, according to Dr. Berguer, must force the instruments harder, bend their wrists more, and hold their arms higher than during an open procedure. These combined factors, he said, can produce substantial hand and shoulder fatigue and soreness. The surgeon works through small ports of 3 to 10 mm, he explained, which, through complex internal mechanical linkage, decrease the efficient transmission of force from the surgeon’s hand to the instrument tip. The surgeon has to work as much as six times harder to accomplish the same grasping task with the laparoscopic instruments, compared with an open operation, Dr. Berguer said. This increase in force, he said, tends to magnify other problems, such as poor handle design and handles too large for small-handed surgeons. Poorly designed instruments create tension and strain in the hands and can even damage the nerves of the thumb.7

“The large instruments are problems for many women with smaller hands but actually for anyone with small hands,” said Dr. Wren, who wears a size 5.5 glove. “Anyone with a glove size of 6.5 and lower can develop chronic paresthesias from handling the large instruments.” There has been little monetary incentive to fix the problem, she said, but noted that women now represent more than 40 percent of all surgeons-in-training, and industrial partners may have to respond to the changing demographics. Medical device manufacturers have responded with motor-assisted staplers, Dr. Wren said, which ease...
the strain of the two-handed force required for using surgical staples. Battery-powered staplers offer the ease of push-button control.

The position of the display monitor also affects ergonomics, Dr. Berguer said. The laparoscopic surgeon views the entire procedure on a display device that is no longer positioned near the surgeon’s hands, and typically sits away from the surgeon. In many cases, the monitor rests on the top of a laparoscopic equip-ment cart, which usually means that the monitor is at or above the surgeon’s eye level.

According to Dr. Berguer, the preferred viewing angle for the video display is 10 to 25 degrees below the user’s eye level. When the display monitor appears at or above the surgeon’s eye, the surgeon’s neck is extended in a stressful and ergonomically damaging pose. One positive development is the advent of flat screen monitors, he noted, which prevent subtle viewing distortions and cause less eye strain. Video display devices mounted on flexible booms allow the surgeon to alter the position of the monitor to obtain the ideal angle between eye level and monitor.10

Laparoscopic instruments change the relationship between the surgeon’s height and the ergonomically sound height of the operating room table.11 Surgeons should insert the laparoscopic instrument handles roughly at, or slightly below, the level of their elbows, according to Dr. Berguer. The laparoscopic table may not lower sufficiently, which leads to human fatigue when surgeons must elevate their arms during the procedure. The height of the table can also affect the upper joint movements of the shoulders, arms, and wrists during laparoscopy.11

Surgeons who use foot pedals should align themselves in the same direction as the instrument, toward the target quadrant and principal lap monitors.12 This setup permits practitioners to activate the pedal without twisting their bodies or legs. If the surgeon is standing on a lifting platform, the pedal should be placed at some level off the ground. A pedal with a built-in footrest is preferable so that surgeons don’t have to hold their foot in the air or move back and forth on the floor.12

In addition, the static postures that surgeons adopt when performing MIS tend to be more disabling and harmful than dynamic postures, as the muscles and tendons develop lactic acidosis and build up toxins when held in a static position, according to Dr. Berguer. Most open surgery requires standing, awkward body positions, and the need to exert force on tissues. But surgeons performing laparoscopic procedures move around less than during open surgery and hold a body posture longer, increasing their physical fatigue, Dr. Berguer said. The surgeon’s static position during MIS probably reflects the increased concentration required to perform surgery with indirect vision and less efficient instruments.7

Some ergonomic problems in surgery may be unre-solvable. “There may not be a technical fix for every technical difficulty we’re discussing,” Dr. Wren said.

**Studying the impact of ergonomics**

Measuring the stress and strain imposed on a surgeon during a procedure presents its own challenges. The surgeon must wear a number of devices in order to be studied, including reflecting markers, motion
sensors, and electrodes (see an example of such a study, conducted at Yale University laparoscopic cholecystectomy lab, in the photo on page 24). Markers applied to the surgeon's clothing may not stay intact during the procedure, and it is unknown how much the applied wires will affect the surgeon during an operation. For these reasons, researchers apply most of their research not during an actual operation but during laboratory experiments.13

Early surveys reported that 20 to 30 percent of surgeons experienced ergonomic problems, according to Dr. Park. But a 2010 survey—conducted by Dr. Park and colleagues at the University of Maryland School of Medicine—of 317 surgeons who performed, on average, 212 laparoscopic operations annually, found that 86.9 percent of respondents had physical discomfort or symptoms attributable to performing MIS.14,15 In the same survey, the researchers found that only 58.7 percent of the surgeons reported adequate awareness of steps to counteract ergonomic concerns.14

In 2011, 1,407 surgeons responded to a survey conducted by the Stanford University Medical Center (SUMC), which questioned the level of discomfort experienced from all types of procedures—open, laparoscopic, and robotic. Among respondents, nearly 61 percent reported ergonomic symptoms, and of this population, 55.4 percent attributed the symptoms to laparoscopic surgery, 36.3 percent to open surgery, and 8.3 percent to robotic surgery. Robotic surgery was more likely to lead to eye pain, and more likely than open surgery to lead to finger pain.16

“We viewed our survey as a first step in understanding what’s happening in the OR,” said the survey’s author, Tim Plerhoples, MD, a third-year resident in the SUMC department of surgery. “The issue of ergonomics seems to be gaining traction,” Dr. Plerhoples indicated, and unlike 20 years ago, surgeons are starting to acknowledge ergonomic issues and to look for ways around them.

“I’m suggesting that we need to study the issues more,” Dr. Park said. “Ergonomics should be classified as one of the basic surgical sciences.” Dr. Nichol agreed, saying, “I think it’s time for the American College of Surgeons to conduct a survey of all its members so we can get to the bottom of the question: ‘How many surgeons are being sidetracked by ergonomic pain?’” Dr. Wren has a vision of an ergonomic specialist who would watch surgeons in practice and offer suggestions to make their jobs more efficient and less physically painful. “Professional violinists have ergonomic specialists who help them overcome potential damage to their muscles,” Dr. Wren said. “Shouldn’t surgeons have them too?”

OR can be a real pain—even for young surgeons

Ergonomic issues may surprise some young surgeons, who have not experienced or noticed the wear and tear on their bodies. Dr. Park participated 14 years ago in an ergonomic experiment conducted by a fledgling industrial economics group at the University of Kentucky, Lexington, while he was a practicing surgeon at the university hospital. The study tested the impact of laparoscopic surgery on the surgeon’s fatigue and work production.

As Dr. Park performed a routine laparoscopic cholecystectomy, a procedure that took him less than 25 minutes to complete, the researchers studied the biomechanics of his movements.

“I thought they would report that I had performed like ‘poetry-in-motion,’” Dr. Park said. He was astounded when the researchers informed him that if he were a small business, they would have to shut him down. “The results pointed to ergonomic risk factors that violated industrial standards,” he said. Specifically, the researchers found that movements involved with the laparoscopic procedure had a biomechanical impact reflected by muscle strain, sustained contraction, and excessive joint deflection. The findings showed that the MIS surgeon’s tendency to draw his arms away from the midline of his body took a toll on his arm and wrist muscles.

“With laparoscopic instruments, the surgeon is essentially using a chopstick. The result is that our senses must work much harder to achieve the same goals.”

—Dr. Park
“This was really the first firm indication to me that there was a problem,” Dr. Park said. “I soon realized the dearth of materials covering the subject of surgery and ergonomics. As surgeons, we know what posture and movement should look like, but we have little data to support our theories.”

“More surgeons are raising questions about ergonomics, but this is still a relatively new field,” Dr. Park said. “We need to begin by sitting down with our industrial partners in a cooperative search for answers. I am convinced that the solutions to these problems will come through multidisciplinary, coordinated efforts.”

“Ergonomics is a field that is wide open for investigation,” according to Dr. Park, and there is plenty of work left to be done. “I tell young surgeons, ‘This is an opportunity to carve out some answers in a field where there are still so many questions.’”

In the end, he said, ergonomic issues aren’t just surgeons’ problems. “We have a whole population of stakeholders, including health policy planners, hospital administrators, insurance companies, and of course, patients—many of whom don’t yet realize they are in an environment where demands for surgeons are growing,” Dr. Park said. “The last thing any of us wants to count on as we address a looming surgeon shortage is a shortened surgical career.”

References


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Recycling the retired surgeon

SURGICAL ASSISTING—

A Canadian’s perspective

by Sigmund H. Ein, MD, FACS

with Emmanuel Amurawaiye, MD, and Arlene Ein, RN

Most surgeons never receive any training on how to set up an office and run a practice—private or full-time academic. It’s enough of an intellectual and physical challenge to absorb general surgical training, let alone the surgical specialization that often follows. Therefore, it is not surprising that most, if not all, surgeons have no idea how to plan for their retirement or even what to do when that magic time arrives. One solution is to become a surgical assistant. This article provides some perspective on becoming a surgical assistant and an historical review of surgical assisting in North America, particularly from a Canadian’s perspective.

Retirement

Many surgeons start to think about retirement as they approach the 60-year mark. In a 2000 longitudinal analysis of the U.S. pediatric surgeon workforce, the average age of graduating trainees going into practice was 34, and the average practicing lifetime of pediatric surgeons was 30 to 32 years, making the typical retirement age approximately
In a personal communication during the annual meeting of the Specialty Committee of Pediatric Surgery (of the Royal College of Physicians and Surgeons of Canada) in September 2010, it was revealed that an estimated 5 percent of pediatric surgeons presently in active practice in Canada and the U.S. are in their 60s.

Statistics Canada reported, “Retirees (over the age of 55) have more health problems than people their age who don’t stop working altogether.” This 2009 report showed that approximately 24 percent of Canadians who were fully retired from the workforce said their health was in poor or fair condition and influenced their decision to retire, compared with 11 percent of those who were only semi-retired, and 5 percent of those (ages 55 to 64) who had returned to work after their initial retirement. In these latter two groups, financial considerations drove 40 percent of these retirees to continue working. Eleven percent claimed that retirement separated them from the social support that their workplace and co-workers provided.

Few of our advisors prepare us for the beginning of a surgical practice, and even fewer prepare us for its end, and so it’s perhaps no surprise that some surgeons can’t really decide when it is time to retire. If we could, it would always be nice to retire on our own terms—when we want to and how we want to. Mike Hargrove expressed this philosophy nicely when he resigned as manager of the Seattle Mariners in early July 2007:

1. Leave on Your Terms, Not Your Bosses’. …Hanging on until someone else decides you should go, while gratifying to the passive, results more often than not in more traumatic departures…bittersweet with the accent on the bitter.

2. Leave on a High Note. More often than not, you’re remembered for whatever big event or set of events happened just before you left office… So more than just leaving at a time of your own choosing, try to leave on a highlight, a new accomplishment, something positive you will always be remembered for.

3. Leave If You Know You Can’t Get Better Every Day/Week. …In a competitive world, you’re not doing your workgroup, your organization or yourself much of a favor by going through the motions…

Once the decision to retire is made, retirees need to figure out what they will do with all of their spare time. For people who are used to working 100 hours per week, “sitting around” is not likely to be a viable option. As a common aphorism advises, the most important thing is to be useful.

A personal experience

For me, the solution was surgical assisting. I began surgical assisting in a large, community general hospital in July 2005. Lakeridge Health Oshawa (LHO) is 100 years old and is now the largest part of a four-hospital complex with 637 beds. Oshawa is located 50 km east of Toronto, ON, with a population of 150,000. LHO is one of the busiest acute care community hospitals in Ontario, with a catchment area of 500,000 people. In May 2007, the R.S. McLaughlin Durham Regional Cancer Centre, a $106 million cancer treatment facility, was added to the hospital. The hospital has 16 operating rooms (ORs), of which 10 function daily. The entire surgical staff totals 47, and the only surgical specialties not covered include cardiac, neurosurgery, pediatric surgery, and vascular.

Currently, 14 surgical assistants (SAs) are on staff at LHO: eight retired surgeons (from five specialties) and six retired family physicians/anesthesiologists. All 14 SAs scrub in on daily elective operative lists, and nine take emergency call from 4:00 pm to 7:00 am, and 24-hour weekend and holiday call. SA service is supplied 24/7. Since 2006, LHO has had a teaching association with the department of surgery, faculty of medicine, Queen’s University in Kingston, ON (located 250 km east of Oshawa), which sends a few house officers to rotate through the division of general surgery at LHO. These medical students/residents do not sleep at LHO when they are on call, and do not scrub in on every general surgical case, so their presence is inconsistent and therefore doesn’t always affect the operative help provided by the SA. In some cases, the SA participates in the intraoperative teaching, but only to a minor degree. There are also emergency and family practice residents who occasionally help on obstetrics/gynecology and orthopaedics.

Surgical assisting

The majority of surgeons have spent most of their lives in the OR, largely assisting residents and fellows as they learn the finer points of being a good, gentle surgeon. In that respect, surgical assisting is almost a continuation of our surgical experience, expertise, and lifetime work.

At LHO, the staff surgeons call the SA of their choice to arrange daytime elective surgical assisting, and SAs may sign up for four to six emergency call
days per month. Some SAs choose to only work a few days a week. The only requirement is that the SAs as a group must provide 24/7 emergency call coverage, and that has never been a problem. (Staying in the hospital overnight when on call is optional.) One of the benefits of living in a small town is that everything is nearby; driving time from our house to the hospital is typically a five-minute commute.

Community surgeons have always had some sort of assistance in performing their operations, if only on a purely informal basis. They may do the small operations on their own, but may seek assistance from a colleague, a family physician, or an OR nurse to do the larger and more complex procedures. Surgical assisting has been around for as long as surgical procedures in the OR.

Some individuals have raised concerns about the quality of SA surgical training and experience. It cannot be assumed that the family physician, surgical resident, or registered nurse first assistant (RNFA) has the experience and/or ability to help the staff surgeon if something suddenly goes wrong during the operation, or to even complete the operation if something should happen to the surgeon. Most family physicians and nurses do not receive any special surgical training to act as SAs other than on-the-job experience. Moreover, both the Ontario Medical Association and Ontario College of Family Physicians acknowledge that most physician assistants lack the ability to complete an operation should something happen during the operation and/or to the staff surgeon. More often than not, in such emergency situations, the staff surgeon or the SA is able to call for help, especially if it’s during a daytime elective case. However, help may not be immediately available during an emergency procedure, especially if it should occur at night, on a weekend, or on a holiday. In some rare instances, the SA could possibly complete the procedure, or at least help control the intraoperative emergency. In most cases, however, the SA would be unable to complete the operation, unless the SA is a surgeon. Certainly, a family physician, junior surgical resident, or RNFA would be ill-prepared to handle such a situation; hence the need for the retired surgeon as an SA. Presently, the Section of SA of the Ontario Medical Association is exploring the possibility of establishing requirements to be an SA.

The medicolegal responsibility of an SA seems to be a common-sense one, according to the Canadian Medical Protective Association (CMPA). SAs are expected to speak up and/or surgically intervene when they believe that something serious or life-threatening is occurring during an operation. I have rarely seen this occur in my five years as an SA. On the other hand, sometimes I have been asked my opinion on certain aspects of an operation, and very occasionally, I have offered a suggestion that I thought might benefit the operative procedure. On both of the former occasions, my opinion seemed to be well-received. Apart from my intraoperative time and responsibility, I have no other patient or surgical obligations, which makes the role of surgical assisting more fun than work. Moreover, because I am still reading, writing, and reviewing pediatric surgical papers, I can do this work between cases without shirking my patient-care obligations.

The only expenses that LHO SAs incur are the annual CMPA malpractice fee, medical college practice fees, and the annual fee for the medical staff association; the latter is part of the hospital appointment of the SA to the courtesy staff.

“...Surgical assisting is almost a continuation of our surgical experience, expertise, and lifetime work.”
History of surgical assisting

Surgical assisting as a distinct profession has evolved in North America in several definitive ways. First, there is the physician assistant (PA), who provides a broad range of health care services, including assisting in surgery. The PA came into existence in the mid-1960s due to the shortage and uneven geographic distribution of primary care physicians in the U.S. Eugene A. Stead, MD, of Duke University Medical Center, Durham, NC, assembled the first class of PAs in 1965, composed of former U.S. Navy hospital corpsmen and U.S. Army combat medics who had received considerable medical training during their military service and gained valuable experience during the Vietnam War. According to the American Academy of Physician Assistants (AAPA), as of January 2008, an estimated 68,000 PAs were working, with 24 percent employed in hospitals. Because of several recent developments—one of which is restrictions on resident work hours—the U.S. Department of Labor’s Bureau of Labor Statistics anticipates the employment of PA to grow 27 percent by 2016, much faster than the average for all occupations.

There is very little literature on the use of PAs within the Canadian health care system. Sigurdson, using data from two hospitals in Halifax, NS, demonstrated that the use of PAs could significantly increase surgical productivity. According to the Manitoba Pharmaceutical Association Newsletter and Canadian Association of Physician Assistants, the PA concept is being explored by this association. Canadian military PAs are gaining legislative changes, allowing them to work in the civilian world after retirement from military service. These education programs (which are 24 month-long sessions) are now offered at the Universities of Manitoba, Western Ontario (London), McMaster (Hamilton), and Toronto.

In 1979, a group of SAs banded together to form the Virginia Association of Surgical Assistants and set up a job description and standards for practice in the U.S. The Eastern Virginia Medical School then became the home for the SA program in the U.S., and with the help of the department of surgery at Sentara Norfolk General Hospital, Norfolk, VA, they developed a certification exam. This group also conducted a survey across the U.S. to determine how many individuals were actually working as SAs. The researchers were amazed to find out how many unofficial SAs there were who were unrecognized and untrained for the job. Reaching out across the U.S., the association’s membership grew and eventually the Virginia Association of Surgical Assistants became the National Association of Surgical Assistants (NSAA) in 1983, with a professional code for its members. In the U.S., the Certified Surgical Assistant (CSA) designation is now available to qualified applicants including medical graduates, allied health professionals, medical doctors, doctors of osteopathy, and foreign medical graduates. As of December 2008, the NSAA must approve all SA education programs in the U.S. before graduates may sit for the CSA certification examination.

In July 2005, there was no formally recognized SA organization in Canada. When I started my surgical assisting, LHO had 12 SAs for elective daytime surgical lists, but only three regularly took emergency call (nights, weekends, and holidays). That left some elective and many emergency operations without an assistant of any kind. In such instances, a doctor colleague (surgical or otherwise) who happened to be in the hospital at the time was asked to help with the operation; otherwise, it was left to the OR nurse to lend a hand. When I looked at the SA emergency call schedule and realized that only Mondays, Wednesdays, and Fridays were covered in a consistent fashion, I put my name down to cover Tuesdays, Thursdays, and one weekend day. With that move, there was virtually 24/7 coverage.

As a result of what, at the time, was an inconsistent call schedule situation (which was likely happening for years at other community hospitals in Ontario as well), the College of Nurses of Ontario (CNO) wrote to the Ontario Medical Association (OMA) on May 26, 1997, “...requesting information regarding the role of the surgical first assistant and requesting a meeting with the OMA to discuss this matter.” On October 29, 1997, the OMA met with the CNO to discuss the role of the surgical first assistant, and the College of Family Practice was also invited by the CNO to attend this meeting. At the meeting, it was established that “Nurses in Ontario are, in fact, carrying out the role of surgical first assistant in many instances and do so without the sanction of their college.” It was further noted at that time by the OMA that “...to date the CNO position is that the role of surgical first assistant is beyond the scope of nursing.” The recommendations from that meeting were as follows:

1. The surgeon must have the authority to determine who will be the surgical first assistant.
SAs are the world’s best kept secret for the retired surgeon (at least until now).

• The patient’s family physician should be the surgical first assistant in most circumstances.
• If the surgical first assistant is someone other than a physician, appropriate certification to ensure the proper skill set and knowledge must be provided.
• Funding for the nonphysician surgical assistant must be determined (the Ontario Health Insurance Plan [OHIP] is not to be the source of that funding).
• The issue of liability is a critical one and it must be determined that there is demonstrated adequate coverage for nonphysician surgical assistants.5

Today’s SA
In May 2006, Ontario’s Ministry of Health and Long-Term Care (MOHLTC) attempted to fill the shortage of health care professionals by creating four new roles in areas of need, one of which is “surgical first assist.” In 2007, MOHLTC began funding 50 percent of RNFA positions in order to decrease wait times for orthopaedic surgery. The RNFA is an interest group of the Peri-Operative Registered Nurses Association of Ontario. They report:

As more individuals learn about the benefits of the position (SA) either through direct experience or published reports, interest in the role increases. This, coupled with the reality of physician shortages, is bringing the RNFA role to the forefront in numerous hospitals across the country. Nonetheless, funding the position is one of the largest challenges that hospitals and RNFAs face in converting a recognized need into the reality of a paid RNFA position. The RNFA has, however, had success in situations where physician/resident assistants are not available, or where there is a shortage of available qualified assistants. The RNFA position is not intended as a replacement for all physician/resident assistants.13

In fact, four years later, in 2010, Chris Jamieson, MD, professor of surgery at Dalhousie University, Halifax, NS, and president of the Canadian Association of General Surgeons, said the degree to which surgeons and general practitioners/family physicians (GPs/FPs) interact directly depends on the size of the community.14 However, Robert Algie, MD, president of Ontario College of Family Physicians (who practices in the small northern Ontario community of Fort Frances), concurs with this observation, and is of the opinion that GPs/FPs working in more rural areas maintain close relations with their surgical colleagues. However, Dr. Algie goes on to say that having GPs/FPs assist in the OR may not be the most effective use of their time, and in his community, nurse practitioners have taken on this role very effectively.14 The statements and observations made by Dr. Jamieson and Dr. Algie strengthen the argument that there is a demonstrated need for SAs.

In Canada, most surgical programs and hospitals do not pay directly for their SAs. Traditionally, SAs have been family physicians who bill their provincial health care plan for their services. Some provincial health departments (including British Columbia’s) calculate precisely how much public money is paid out for SA.13,15 Most provinces, however, do not track this information. Family physicians and surgical residents are not hospital employees, and hospitals do not have funds designated for SAs; therefore RNFAs are in a tenuous situation. (Surgical residents also assist in the OR as part of their residency training, almost always in teaching hospitals.)
In July 2005, the only remuneration for SAs at the LHO was a fee for each operation, as listed in the Ontario Schedule of Fees, based on both the type of procedure (elective or emergency) and the length of time spent in the OR. In September 2005, the LHO administration asked the SA section for its “mandate, goals and objectives.” On October 13, 2005, the SA section met and formulated the following:

• Establish and maintain a status and dialogue with the hospital and between members of the section with respect to availability, on-call coverage, compensation, and other items of interest
• Provide a source of medical and surgical experience in the OR
• Clarify the role of continuing medical development
• Make a membership list available to members and surgeons/offices
• Explore the relationship with other sites

The MOHLTC of Ontario sent a letter to the chief executive officer of the LHC stating that the Hospital On-Call Coverage (HOCC) Enhanced Program became effective on October 1, 2005, and that no hospital was to add to this stipend. In November 2005, the OMA held the first meeting of the probationary section of OR assistants to discuss rules and regulations, central registry, HOCC stipend, and so on. The HOCC funding for SAs was approved for LHO in May 2006 at $480 per on-call day (in addition to anything that is billed by the SA), retroactive to October 2005. The first annual meeting of the OMA Probationary Section of Operating Room Assistants was also held, and its name was changed to “Surgical Assistants”; business (in the full sense of the word) of the section was under way, including progression to full section status.

SAs earn half as much money, work one-quarter the time, and have none of the legal responsibilities of practicing surgeons. Nothing is compulsory. SAs are the world’s best kept secret for the retired surgeon (at least until now).

References


Dr. Ein is courtesy staff, surgical assistant, department of surgery, Lakeridge Health Oshawa, Oshawa, ON, and honorary staff surgeon, division of general and thoracic surgery, Hospital for Sick Children, Toronto, ON. He is also adjunct clinical faculty, associate professor of surgery, faculty of medicine, University of Toronto, ON.

Dr. Amurawuiye is senior surgeon and former chief of surgery, department of surgery, Lakeridge Health Oshawa, ON.

Ms. Ein is a registered nurse and a research assistant and meeting coordinator for the Canadian Association of Pediatric Surgeons, Oshawa, ON.
Dr. Hughes elected to six-year term on American Board of Surgery

Tyler G. Hughes, MD, FACS, was recently elected to a six-year term, beginning July 1, as an at-large director of the American Board of Surgery (ABS), the national certifying body for general surgeons and related specialists. Dr. Hughes, a community surgeon from McPherson, KS, was one of 65 candidates drawn from an open nomination process.

A native of Dallas, TX, Dr. Hughes has maintained a broad general surgery practice for the past 16 years at McPherson Hospital in McPherson, a town of 13,000, with a surrounding population of 30,000. He has a single surgical partner and is on call every other night.

Dr. Hughes, a member of the Board of Governors of the American College of Surgeons (ACS) was president of the Kansas chapter in 2007. He assists in the ongoing development of the ACS case log system, and is co-editor of the rural surgeons’ community section of the ACS Web portal.

In addition, Dr. Hughes serves on the editorial boards of *Surgery News*, *Selected Readings in General Surgery*, and *Evidence-Based Reviews in Surgery*. He also has written a number of articles for the *Bulletin of the American College of Surgeons*.

In addition, he independently developed a rural surgeons’ network and served as a co-director of the ACS Rural Surgery Skills Course.

Dr. Hughes obtained his medical degree from the University of Texas Southwestern Medical Center, Dallas, and worked as assistant program director under Ernest Poulos, MD, FACS, and as a teaching attending at St. Paul Medical Center in Dallas, where Dr. Hughes completed his general surgery residency.

Since moving to McPherson, Dr. Hughes has worked primarily with medical students as a clinical faculty member at the Kansas University School of Medicine. In 2010, Dr. Hughes received the school’s first Outstanding Preceptor Award.


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College will celebrate 100th anniversary with commemorative publication

As part of its year-long centennial celebration, the American College of Surgeons (ACS) recently announced plans to produce a high-quality, magazine-style publication featuring articles about historical achievements across the breadth of the surgical specialties.

The ACS has licensed Faircount Media Group to produce this soft-cover edition, which will be provided free of charge to all attendees at the 2012 ACS Clinical Congress, September 30 to October 4, in Chicago, IL.
The American College of Surgeons (ACS) and the American Society for Metabolic and Bariatric Surgery (ASMBS) signed a memorandum of understanding on March 7 as part of an agreement to unify their two separate bariatric surgery accreditation programs—the ACS Bariatric Surgery Center Network (BSCN) and the ASMBS Bariatric Surgery Centers of Excellence (BSCOE) program. As a result of this historic move, one gold standard for accreditation in bariatric surgery will be achieved, according to ACS Executive Director David B. Hoyt, MD, FACS, who signed the agreement on the College’s behalf.

The development of a single standard provides a solid foundation to enhance patient safety and return added value to the participating programs, said Robin Blackstone, MD, FACS, president of the ASMBS and an ACS Governor from Scottsdale, AZ. “The light of leadership of ASMBS and ACS burns brighter in the field of quality improvement through our joint effort,” added Dr. Blackstone, who signed the memorandum on behalf of the ASMBS.

To facilitate the transition toward unified accreditation, all institutions that have met the standards set through either the ACS BSCN or the ASMBS BSCOE program will be accredited through the joint program. All centers will report to the same data registry, which will build on the current ACS BSCN data collection platform.

A committee will be formed to oversee the program with representation from both societies. This committee will develop new outcomes based accreditation standards. These new standards will be implemented as soon as the criteria are approved by the Centers for Medicare & Medicaid Services and a robust infrastructure to allow centers to apply and be certified is in place.

The memorandum of understanding takes effect on April 1. For more information, contact bscn@facs.org.
At the RCSI Charter Day meetings (from left, all FRCSI): Kevin O’Malley, MD, RCSI Council Member; Dr. Britt; Prof. Eilis McGovern, MD, DCh, FACS(Hon), RCSI President; Dr. Gullane; Laura Viani, MSc, RCSI Council Member; and Joseph Duignan, MD, RCSI Council Member.

Immediate Past-President of the American College of Surgeons (ACS), L. D. Britt, MD, MPH, FACS, FCCM, FRCSEng(Hon), FRCSEd(Hon), FWACS(Hon), delivered the Johnson & Johnson Lecture at the annual Charter Day meetings of the Royal College of Surgeons in Ireland (RCSI), February 2–4 (see photo, this page). His address was titled Acute Care Surgery in the 21st Century, and focused on the delivery of emergency general surgery in the U.S.

Dr. Britt was one of two ACS Fellows at the Charter Day dinner to receive honorary fellowship in the RCSI—the highest honor bestowed by the organization. Patrick Gullane, MD, FACS, FRCSC, an otolaryngologist and professor of surgery at the University of Toronto, ON, who delivered the 87th Abraham Colles Lecture, titled Creativity and Innovation in Head and Neck Surgery: The Journey of a Lifetime, also was accorded honorary fellowship in the RCSI.

More than 300 delegates attended the RCSI meetings, which offered scientific lectures from approximately 50 leading national and international speakers. For more information on the RCSI Charter Day meetings, go to http://www.rcsi.ie/index.jsp?n=110&p=100&a=2062.
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Two Fellows of the American College of Surgeons (ACS)—Bruce Lee Hall, MD, PhD, FACS, and Don E. Detmer, MD, FACS—have been appointed to National Quality Forum (NQF) advisory groups in recent weeks.

Dr. Hall, a general surgeon and assistant professor of surgery at Washington University in St. Louis, MO, was appointed to the NQF’s Patient Outcomes: All-Cause Readmissions Expedited Review Project 2011 Steering Committee. The ACS submitted Dr. Hall’s nomination to the committee, which oversees the endorsement of cross-cutting (not condition-specific) performance measures for accountability and quality improvement that address all-cause readmissions. As part of this process, the committee also evaluates all-cause hospital readmissions-related consensus standards that NQF endorsed before June 2009. The NQF uses the endorsed measures for public reporting and to improve the quality of hospital care.

Dr. Detmer, Medical Director of the Division of Advocacy and Health Policy at the College, has been selected to serve as a member of the NQF’s Common Formats Expert Panel, which is a collaborative effort between the NQF and the U.S. Department of Health and Human Services’ Agency for Healthcare Research and Quality (AHRQ). NQF convenes an expert panel to review comments received about the AHRQ-developed Common Formats and makes appropriate recommendations. A vascular surgeon from Charlottesville, VA, Dr. Detmer previously served as senior advisor for the American Medical Informatics Association.

The NQF is a multi-stakeholder not-for-profit organization that builds consensus on national priorities and goals for performance improvement, working in partnerships to achieve them; endorses national consensus standards for measuring and publicly reporting on performance; and pursues national goals through education and outreach programs. Through various projects, the NQF has previously endorsed more than 100 consensus standards related to patient safety.


Karen Borman, MD, FACS, has been appointed to the Advisory Panel on Hospital Outpatient Payment. The Centers for Medicare & Medicaid Services (CMS) announced the appointment of six new members last week. The purpose of the panel is to provide expert guidance to the Secretary of the U.S. Department of Health and Human Services (HHS) and the CMS Administrator regarding the clinical integrity of ambulatory payment classification groups and their weights.

The panel also addresses and makes recommendations regarding supervision of outpatient services. CMS and HHS will take the panel’s advice into consideration when updating both the hospital outpatient and the ambulatory surgical center prospective payment systems.

The panel comprises 19 members who are employees of hospitals or hospital systems and other Medicare providers. Each panelist will serve a four-year term. Dr. Borman’s term begins August 1, 2012, and ends July 31, 2016. She is the senior associate program director of the general surgery residency program and an attending physician at Abington (PA) Memorial Hospital.

Dr. Borman also serves on the American College of Surgeons General Surgery Coding and Reimbursement Committee. For more information on the panel, go to https://www.cms.gov/FACA/05_AdvisoryPanelonAmbulatoryPayment-ClassificationGroups.asp.

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Include your Fellowship ID number in your note.

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Dr. Sachdeva honored with SSH award for contributions to health care simulation

The Director of the American College of Surgeons (ACS) Division of Education, Ajit K. Sachdeva, MD, FACS, FRCSC, has received the Society for Simulation in Healthcare (SSH) Award for Outstanding Contributions to Healthcare Simulation. The SSH president, Mary E. Mancini, PhD, RN, FAAN, and the immediate past-president of SSH, Michael Seropian, MD, FRCPC, presented the award to Dr. Sachdeva during the opening ceremony of the recent Annual International Meeting on Simulation in Healthcare, in San Diego, CA. SSH—a multidisciplinary national organization with a sizable international membership—promotes simulation to achieve excellence in medical, surgical, and health care education, and in practice and research.

The award recognizes Dr. Sachdeva’s innovative work and national leadership in advancing simulation-based education and training. Several major accomplishments of Dr. Sachdeva were mentioned, including his leadership in establishing the ACS Program for Accreditation of Education Institutes (Simulation Centers). Under Dr. Sachdeva’s leadership, the ACS Division of Education continues to address a broad range of core competencies in surgery, including cognitive skills, technical skills, communication, teamwork, and systems-based practice, through state-of-the-art simulations.

“The efforts of the ACS Division of Education are specifically designed to promote excellence and expertise in surgery. We have received national and international recognition for these innovative programs,” said Dr. Sachdeva.

Dr. Sachdeva received his medical training at the All-India Institute of Medical Sciences, New Delhi, India. He completed a surgery residency at the Hospital of the Medical College of Pennsylvania in Philadelphia and has held specialty certification in surgery since 1981. Dr. Sachdeva has participated in the Harvard Macy Institute Program for Leaders in Medical Education. Before joining the College, Dr. Sachdeva was the Leon C. Sunstein, Jr., Professor of Medical and Health Science Education and professor and vice-chairman for educational affairs, department of surgery, at the MCP Hahnemann School of Medicine, in Philadelphia, PA. He was also associate dean for medical education and director of the Academic Center for Educational Excellence at that institution. In addition, Dr. Sachdeva served as chief of surgical services at the Philadelphia Veterans Affairs Medical Center for more than eight years. He has received many prestigious awards for his landmark contributions to surgical and medical education and has served as president of several national professional organizations.

Dr. Sachdeva is also an adjunct professor of surgery at The Feinberg School of Medicine at Northwestern University, Chicago, IL.
Dr. Moalem recognized for leadership in endocrine surgery, patient care

Jacob Moalem, MD, FACS, an endocrine surgeon and assistant professor of surgery at the University of Rochester (NY) Medical Center, received a Leadership Award from the American Medical Association (AMA) Foundation, in association with Pfizer Inc., in February. The Foundation presents several of these awards annually to medical students, residents, fellows, and early-career physicians who have exhibited outstanding leadership in organized medicine, education, public health, or community service. The awards support leadership development training for these leaders to further strengthen their efforts toward advancing health care.

Dr. Moalem was recognized for conducting research in endocrine surgery and surgical education, serving as an outstanding educator of residents and medical students, and leading the development of a support group for patients with thyroid cancer.

Dr. Moalem has been a highly active member of the American College of Surgeons (ACS) since becoming a Resident Member in 2003. He served in various leadership positions in the Resident and Associate Society of the ACS (RAS-ACS) and chaired that group from 2008 to 2009. He also served as the RAS-ACS representative in the AMA House of Delegates from 2005 to 2007 and currently serves as the College’s delegate in the AMA Young Physicians Section.

For more information about the Leadership Award, go to http://www.ama-assn.org/ama/pub/about-ama/our-people/member-groups-sections/resident-fellow-section/awards-grants/ama-foundation-leadership-award.page.

Trauma meetings calendar

The following continuing medical education courses in trauma are cosponsored by the American College of Surgeons Committee on Trauma and Regional Committees:

- **Point/Counterpoint XXXI, Acute Care Surgery**, June 11–13, National Harbor, MD. For information, contact 757-446-8967.

- **Advances in Trauma Conference**, December 7–8, Kansas City, MO.

  Complete course information can be viewed online (as it becomes available) through the American College of Surgeons’ website at http://www.facs.org/trauma/cme/traumtgs.html, or by contacting the Trauma Office at 312-202-5342.
Two lung surgery clinical trials are currently being conducted through the Alliance for Clinical Trials in Oncology. These two trials are highlighted in the accompanying diagram (see Figure, page 42) with an algorithm to assist in decision making and patient eligibility.

The surgical standard of care for early-stage non-small cell lung cancer (NSCLC) is an anatomic lobectomy with mediastinal nodal staging in patients with acceptable perioperative risk. In 1995, the Lung Cancer Study Group (LCSG) published the results of a randomized trial in which 267 patients with peripheral T1N0 tumors were randomly assigned to lobectomy or limited resection. Based on this study, lobectomy was established as the standard of care.1

Several studies suggest that survival is related to tumor size; specifically, that survival is better in patients with tumors 2.0 cm or less. A study published in 2003 analyzed a series of 244 patients who underwent resection for confirmed Stage 1A NSCLC. That research showed a statistically significant difference in survival between patients with tumors \( \leq 2 \) cm (five year survival of 77.2 percent) when compared with patients having tumors greater than 2 cm (five year survival of 60.3 percent).2 Another study also found improved survival in patients with tumors < 1.5 cm.3 Yet another study indicated no statistically significant difference in overall five-year survival following lobectomy or segmentectomy in patients with tumors 2 cm or less.4

This evidence indicates the need for evaluation of lobectomy versus sublobar resection in this subset of tumors. The management, as well as the definition, of high operative risk is controversial but important to evaluate. Stereotactic Ablative Radiotherapy (SABR) has been evaluated since the 1990s and has been demonstrated to control primary lung cancer. RTOG 0236 demonstrated a 56 percent overall three-year survival in medically inoperable patients with biopsy proven lung cancer.6 The American College of Surgeons Oncology Group clinical trial known as ACOSOG Z4099 is designed to evaluate management of patients deemed high risk for surgery but able to undergo sublobar resections and compare them with patients who have undergone SABR.

**CALGB 140503**

The Cancer and Leukemia Group B (CALGB) 140503 trial is currently evaluating the potential benefit of sublobar resection for peripheral NSCLC \( \leq 2 \) cm. The primary objective is to determine whether disease-free survival after sublobar resection (segmentectomy or wedge) is “non-inferior” to that after lobectomy in patients with small \( \leq 2 \) cm NSCLC. The center of the tumor as seen with computed tomography (CT) must be located in the outer third of the lung in either the transverse, coronal, or sagittal plane. Patients will be randomized intraoperatively once there is confirmation of non-small cell lung cancer and N0 status by frozen section examination. Nodes may be sampled at the time of operation or preoperatively by mediastinoscopy within six weeks of the definitive procedure. The inclusion and exclusion criteria for participation in the clinical trial are as follows:

- **Inclusion criteria:**
  - Patients with peripheral lung nodule \( \leq 2 \) cm on preoperative CT scan
  - Patients with a histologically confirmed diagnosis of NSCLC
  - Patients with confirmed N0 status by frozen section examination

**Study information**

**CALGB 140503**
Nasser Altorki, MD, FACS
Principal Investigator

Thomas Bauer, MD, FACS
Robert Keenan, MD, FACS
Co-Principal Investigators

**ACOSOG Z4099**
Hiran Fernando, MD, FACS
Principal Investigator
Lung surgery trial algorithm

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Eastern Cooperative Oncology Group performance status of 0-2

- Exclusion criteria:
  - Prior malignancy within five years (with the exception of non-melanoma skin cancer and in situ cancers)
  - No prior intra-thoracic radiotherapy (prior head and neck, breast, or other non-thoracic cancer is permitted)
  - Locally advanced or metastatic disease

ACOSOG Z4099

ACOSOG Z4099 randomizes high perioperative risk patients into three fractions of SABR or sublobar resection (wedge or segmentectomy). Surgeons are given the ability to add brachytherapy to the sublobar resection at their discretion. Inclusion and exclusion criteria for participation in this trial are as follows.

- Inclusion criteria:
  - Patients lung nodule ≤ 3 cm on preoperative CT scan and clinically Ia or Ib (visceral pleural involvement)
  - Patients with a histologically confirmed diagnosis of NSCLC
  - Patients with confirmed N0 status if lymph nodes are > 1 cm on short axis
  - Tumors must be > 2 cm from proximal bronchial tree

- High risk as defined by major and/or minor criteria listed in the protocol

- Exclusion criteria:
  - Prior malignancy within three years (with the exception of non-melanoma skin cancer and in situ cancers)

More information regarding these trials, as well as contact information for participating institutions can be found through the NCI Cancer Trials Support Unit at [http://www.ctsu.org/](http://www.ctsu.org/) as well as on the CALGB website at [http://www.calgob.org](http://www.calgob.org), and the ACOSOG’s website at [https://www.acosog.org](https://www.acosog.org).

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**A look at The Joint Commission**

**New Targeted Solutions Tool to prevent wrong site surgery**

On February 14, the Center for Transforming Healthcare released its newest solution in the ongoing challenge to reduce the risk of wrong site surgery. The center’s new Targeted Solutions Tool (TST) guides health care organizations through a step-by-step process to identify, measure, and reduce risks in key processes that can contribute to a wrong site surgery. The focus on eliminating defects is important because a single operative case has multiple opportunities for problems from the time a procedure is scheduled to the time when the first incision is made. Research has shown that there is usually no one root cause of failure, as it is frequently the result of a cascade of small errors.* While wrong site surgery rarely occurs, health care professionals who perform invasive procedures, who ignore that they are at some degree of risk, or who rely on the absence of such events in the past as a guarantee of future safety, may be doing so at their own risk.

The TST for Wrong Site Surgery provides organizations with a process to evaluate risks across their surgical system, including scheduling, preoperative, and operating room (OR) areas. Because incidents of wrong site surgery are rare, the TST helps an organization efficiently monitor its surgical cases and focus on the specific areas of potential weakness that might result in a wrong site surgery. Surgeons and all other health care professionals at Joint Commission-accredited organizations have free access to the new wrong site surgery TST via their secure Joint Commission Connect extranet. Once accessed, the TST works as a Web-based tool that walks the user through the wrong site surgery performance improvement project from start to finish.

The TST for Wrong Site Surgery is designed so that it can be clearly understood and used by an organization’s current staff without requiring any additional resources to implement the tool’s steps. There are six basic steps that will help guide staff through the project, and each step includes a list of action items to complete before proceeding. By using the TST to identify specific causes that could lead, or have led, to a defect at an organization, and then implementing targeted solutions that address those causes, the TST takes the process improvement that could have been overwhelming and simplifies it.

The Center for Transforming Healthcare’s Wrong Site Surgery Project began in July 2009. Eight U.S. hospitals and ambulatory surgical centers teamed up with the center to address the problem and develop the solutions. The organizations that participated in the project used Robust Process Improvement™ (RPI) methods. RPI is a fact-based, systematic, and data-driven problem-solving methodology. It incorporates tools, concepts, and methods from Lean Six Sigma and change management methodologies to

discover the causes of and put a stop to these preventable breakdowns in patient care. The participants identified 29 main causes of wrong site surgeries that occurred during scheduling, preop/holding, or in the OR, or those causes that stemmed from the organizational culture. The TST was then pilot tested by six hospitals and ambulatory surgical centers.

Over the course of the project, the original eight project organizations were able to reduce the number of surgical cases with risks by 46 percent in the scheduling area, by 63 percent in preop, and by 51 percent in the OR. The hospitals and ambulatory surgical centers that pilot tested the TST experienced gains similar to those of the original participants.

Although invasive surgical procedures occur in many settings, the scope of this project included all procedures performed in the OR and regional blocks performed by anesthesia either in the preoperative area or in the OR. Within the project scope, the time frame begins at the time a procedure is scheduled for surgery and ends with incision.

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. Solutions for hand-off communications, another center project, are expected to be added to the TST in summer 2012. In addition, the center is working to reduce surgical site infections following colorectal surgery through a project that was launched in August 2010 in collaboration with the American College of Surgeons. The solutions for this project are expected to be published later this year. Other center projects include preventing avoidable heart failure hospitalizations, preventing falls with injury, and safety culture.

For more information on the Center for Transforming Healthcare’s Wrong Site Surgery Project and other center projects, visit the following links:


PROVIDE YOUR PATIENTS WITH LEADING-EDGE, HIGH-QUALITY BREAST CARE

Seek accreditation from the National Accreditation Program for Breast Centers (NAPBC). NAPBC accreditation is the best way for your center to offer patients every significant advantage in their battle against breast disease. NAPBC-accredited centers:

- Demonstrate a commitment to high standards of clinical practice and quality improvement by utilizing nationally recognized, multidisciplinary quality performance measures.
- Participate in data collection to monitor outcomes and improve the quality of care at local, state, and national levels.
- Promote patient and professional education for the treatment of breast disease.

Join the nationally recognized network of breast centers dedicated to providing quality breast health care with the full scope of resources and services to support the continuum of care.

MAKE A COMMITMENT TO PROVIDE HIGH QUALITY BREAST CARE TO YOUR PATIENTS.

APPLY FOR NAPBC ACCREDITATION TODAY!

To learn about the accreditation process, visit: [www.accreditedbreastcenters.org](http://www.accreditedbreastcenters.org)
The 2012 World Trauma Congress (WTC) will meet in Rio de Janeiro, Brazil, from August 22 to 25, according to WTC president, Raul Coimbra, MD, PhD, FACS. Health care professionals from around the world will meet at the Congress to discuss vital aspects of trauma care and strategic actions for improving the quality and scientific knowledge of injury as a disease. The World Health Organization now ranks injury as a disease among the world’s most important public health issues.

Scheduled scientific sessions will include a wide range of topics, including global alliance for trauma care; trauma systems implementation in the developing world; endovascular approach in trauma; what, when and how; novel uses of ultrasound in trauma; the role of image in trauma; complex pelvic trauma; war trauma surgery; and cervical trauma. The deadline for submitting abstracts and complete papers, to be considered for inclusion in the Journal of the Brazilian College of Surgeons and the World Journal of Emergency Surgery, is May 1.

For more information, including a complete list of scientific sessions and invited speakers, and to register online, go to http://www.jzkenes.com/congressos/trauma/.

Register now for ACS Comprehensive General Surgery Review Course

Register now for the American College of Surgeons (ACS) Comprehensive General Surgery Review Course, which will take place June 28–July 1 in Chicago, IL. The intensive three-and-a-half day review course will cover the essential content areas in general surgery, including abdomen, alimentary tract, breast, endocrine, oncology, perioperative care, skin and soft tissue, critical care, trauma, and vascular operations.

Course Chair John A. Weigelt, MD, FACS, professor and chief trauma/critical care and vice chairman for education at the Medical College of Wisconsin, Milwaukee, and a distinguished faculty will use didactic and case-based formats for a comprehensive and practical review. Course features include a variety of self-assessment materials, and four additional monthly online modules following the course. Organized by the ACS Division of Education, this course will help fulfill the requirements for Maintenance of Certification, Part 2, and should be helpful in preparing for recertification examinations. Space is limited and registration will be accepted on a first-come, first-served basis. For a brochure or to register online, go to http://www.facs.org/education/reviewcourse.html. For more information, contact pblair@facs.org, or call 312-202-5018.
Keeping up to date is a challenge in today's marketplace. Let us show you how to use the “must have, need-to-know” information straight, organized and on track. If you are in private practice, employed, or considering a change, let us show you how to wrap your arms around the important issues for 2012.

**UPCOMING DATES**

- CHICAGO, IL ........................ April 26-27
- NEW YORK, NY ...................... May 3-4
- NASHVILLE, TN .......................... August 16-17
- COSTA MESA, CA .......................... October 25-26
- CHICAGO, IL .......................... November 15-16

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**Seven Keys to Success for Surgeons (THURSDAY)**

Attend this session and measure your practice’s CPT and diagnostic coding capabilities, revenue cycle management and knowledge of Medicare rules. You’ll leave with an action agenda, solutions for common problems and the confidence of knowing auditors will not be knocking at your door. Learn how to assess the competency of your staff or billing company.

**Successful Surgical Coding and Compliance (FRIDAY)**

No one teaches surgeons the art of dictation or documentation to comply with the ever-growing number of regulations. Attend this course and you’ll leave with actionable, practical “to do’s” that can make a difference. Accurate reporting of your surgical services, using modifiers correctly and learning to think like a payer are featured topics.

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Hope Day, Business Office Manager, Utah County Surgical Associates, Provo, Utah

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Carolyn Messere, MD, FACS, Integrative Surgery PA, Miami Beach, Florida

**“Exceptional course – I’ve seen several things I can do to increase reimbursement.”**
Janet Prior, Athens General and Colorectal Surgeons, Athens, Georgia
The word “bear” is derived from the old English word *bera*, which belongs to a family of names for bears originating from an adjective meaning brown. In Germanic culture, the bear symbolized the warrior. Bears are found in ancient literature, folk songs, mythology, legends, children’s songs, cartoons, on the shelves of your local toy store, or in the hands of a postoperative cardiac surgery patient to encourage coughing and deep breathing. In Chicago, IL, the Bears are the “Monsters of the Midway” and have a black bear as their team mascot. Smokey the Bear (another black bear) warns us of the hazards of forest fires; Yogi Bear (a grizzly) thinks that he is smarter than the average bear; and the Coca-Cola bear (a polar bear) encourages consumers to drink a well-recognized carbonated beverage.

Eight species of bear exist throughout the world.* Bears have lived in the wilderness of all continents except Australia at one time or another, and they are one of the most widely distributed terrestrial mammals on the planet. North America is home to three species of bear, including the black bear, the brown bear, and the polar bear. Each species has unique characteristics and appearances, but all are subject to the misconception that they exhibit predatory behavior toward humans. In fact, people are more than a hundred times more likely to be killed by bees in the U.S. than by a black bear.†

Bears may look like large versions of teddy bears; however, they are wild animals. The overwhelming majority of unplanned encounters with bears should not provoke an attack unless you get between them and their food, a sow and her cubs, or startle them with a surprise encounter, especially in remote areas where they sense that you are encroaching on their territory.†

In order to examine the occurrence of bear-related injuries in the National Trauma Data Bank® research dataset for 2010, admissions records were searched using the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM). Specifically searched were external cause of injury E codes E906.8, other specified injury caused by animal (butted by, fallen on, gored by, run over by, stepped on), or E906.5, bite by unspecified animal. A total of 1,935 NTDB records were found to contain the subset of bear injuries. In all, 1,705 records contained a hospital discharge status, including 1,513 discharged to home, 86 to acute care/rehab, and 87 sent to skilled nursing facilities; one died. These

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patients were 61 percent male, on average 39.8 years of age, had an average hospital length of stay of 4.1 days, an average intensive care unit length of stay of 3.6 days, were on the ventilator for an average of 5.2 days, and had an average injury severity score of 9.4. Emergency department disposition has more than 40 percent of patients either going to the operating room or the intensive care unit (see figure, page 47).

When hiking, it is advisable to stay as far away as possible from remote areas that may be natural bear habitats. There are commercially available bear sprays one can carry that are red pepper-based, shoot more than 20 feet, and have been known to repel a bear attack. However, if an individual encounters a bear, it is a good idea not to run, as bears are capable of chasing you at greater than 25 miles per hour. If the bear comes within 10 feet of an individual, experts suggest lying face down on your stomach with your hands over your neck and playing dead. It is important to remember that as humans we may think that we are smarter than the average bear, but the best rule of survival is to avoid an encounter in the first place.

Throughout the year, we will be highlighting data through brief reports in the Bulletin. The National Trauma Data Bank Annual Report 2011 is available on the ACS website as a PDF file and a PowerPoint presentation at www.ntdb.org. In addition, information is available on our website about how to obtain NTDB data for more detailed study. If you are interested in submitting your trauma center’s data, contact Melanie L. Neal, Manager, NTDB, at mneal@facs.org.

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